# International Journal of economic behavior

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The International Journal of Economic Behavior aims to publish research articles (both quantitative and qualitative), reports from the field, critical review papers, discussions concerning the main characteristics of the economic behavior in management and, consequently, decisions and organization. Moreover, the journal seeks to discuss the manner in which some of the classical theoretical statements, practices and policy making in Economics, Business and Management are influenced by factors which are not proven to fit the well-known hypothesis of economic rationality. The interdisciplinary approach is required, as economics, management, psychology, sociology, anthropology are domains that help in understanding the complex economic behavior within and outside companies and provide the researchers with complete tools for analysis.
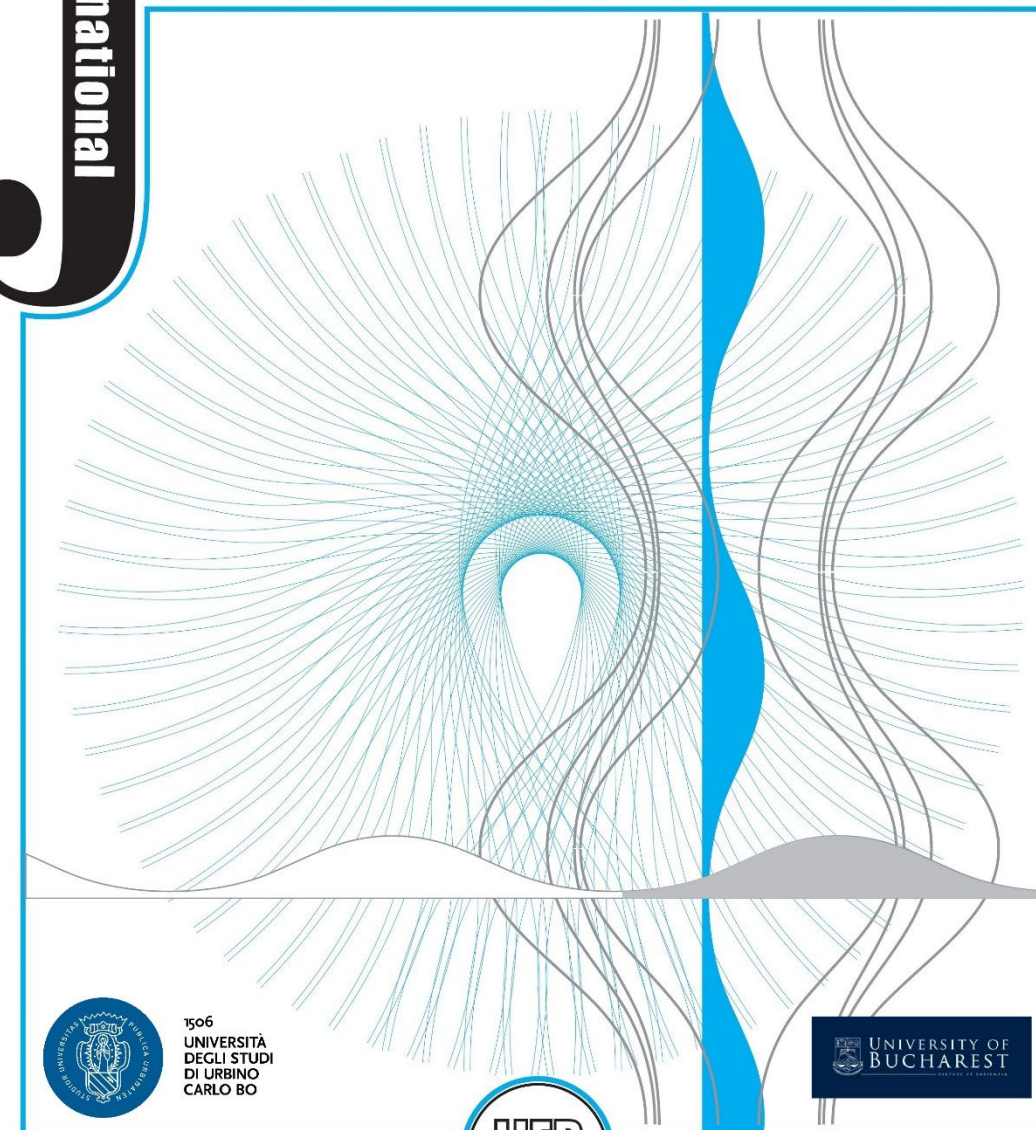
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# ECONOMY AND SOCIETY CHANGES
# IN THE POST-COVID ERA

## Editorial of the International Journal of Economic Behavior, Vol. 11

As Western countries are approaching post-Covid normality, the common sentiment is that the pandemic has been an epochal watershed for the international economic and geopolitical landscape. It is not difficult to predict that the world will be significantly different to what it was before 2020. However, even before the pandemic, some to long-term trends − such as the digital and ecological transition − were already clearly visible. At the same time, a redistribution of global economic power had already been underway for some years, with China (and the Asian countries linked to it) as a primary actor of an apparently unstoppable growth capable of questioning the leadership of the United States. In this context, Europe is losing ground due to a stagnant economy and a critical political-institutional inertia. The pandemic has accelerated these trends, but also spurred stronger policy responses from governments.

Looking at the next years, four main trends deserve to be highlighted. The first one is linked to the fight against climate change: to overcome this challenge, it will be essential that the recent announcements for the pursuit of climate neutrality by 2050-2060 are accompanied by concrete actions. So far not all countries have shown similar sensitivity to these challenges, both for political reasons and because of their different levels of economic development.

Furthermore, some countries may not have sufficient financial autonomy to support their energy transition. This is also why it is increasingly important to have common and shared rules on how much sustainability is worth. This is an essential information, so that investors can base their choices on plausible projections. The ecological transition towards new 'clean' and 'green' business models will be successful only if the world of business and finance find the right incentives to invest in new energy sources and aim for more sustainable production.

The second trend is related to the digital transition. Technologies such as artificial intelligence, machine learning, internet of things are becoming more and more pervasive. However, digitization could further amplify inequalities, both between countries and within them. If in the past many studies reported a positive impact of digital technologies in terms of energy saving or for the substitution effect of the change in the industrial structure (Takase and Murota, 2004; Rexhäuser et al., 2014), more recently the debate highlighted the negative impact in terms of energy consumption and consequent emissions deriving from the diffusion of certain innovations, first of all cryptocurrencies (Gallersdörfer, 2020; Vranken, 2017; Lange *et al.*, 2020; Gelenbe and Caseau, 2015).

In all cases, the technologies falling within the category of industry 4.0 generate effects on employment that have been little considered except through studies that demonstrate the positive employment effects from the adoption of digital technologies (GeSi, 2012).

Recent analyzes (Dantas *et al.,* 2021) have highlighted that the effect of innovations related to industry 4.0 can also lead to negative results. One of the recognized problems is related to the impact on a social level and in particular on the generation of jobs (Bai *et al*., 2020; Korhonen *et al*., 2018). It is estimated that about 8.5% of the global manufacturing workforce

will be replaced by technologies related to industry 4.0 by 2030, corresponding, in the case of China alone, to 14 million jobs (Oxford Economics, 2019).

The greater efficiency that is determined at the system level and the lower need for human work should leave room for a corresponding development of social and welfare activities, allowing the reallocation of the many people who, inevitably, will be replaced by machines that will be increasingly autonomous (Dantas *et al.*, 2021).

The third trend is that related to demography and the aging of population. In recent years Europe faced this issue more than the other continents, showing a ratio of over 65 to under 15 of over 130%, with obvious implications in terms of sustainability of the welfare systems. The rapid aging of the population represents a great challenge for Europe, with the need to find the resources to provide services to a population more in need of care and assistance, in the face of an ever-lower share of workers. In any case, all sectors related to services for the elderly are set to grow in the coming decades.

Finally, the fourth major trend concerns distribution systems and the way in which they impact on consumer behavior. The pandemic has generated an acceleration in a process of change in consumer behavior that was already underway (Druica *et al.*, 2020). This is happening not only with reference to the purchase of products, but also for the social aggregator role that traditional retail palyed. In fact, the way in which retailing has so far contributed to characterize the places of sociality (town centers, shopping centers) is destined to deeply change.

The growing share of e-commerce is leading to redefine the business models of companies. Many businesses around the world have become aware of having to reconsider their market relationships starting from marketing channels (Fortuna *et al.*, 2021). The shift to online sales has been much faster than expected, pushing companies to rethink their strategies as regards the way of relating to the market, both in terms of communication and in the use of marketing channels, from multichannelling, to omnichanneling (Musso and Adam, 2020). The new scenarios that will emerge will in any case be characterized by high variability, given the developments in technologies that continually evolve and put into question every progress, making it only temporary. The articles in this issue of IJEB deal with some of the main issues involved in these changes.

The first article from Maria-Magdalena Roșu and Răzvan-Mihai Băcanuand entitled "Bridging Intention-Action Gap for Healthcare Measures During the COVID-1 19 Emergency Period" focuses on the distance between intention and action in the case of the healthcare measures during the Covid-19 lockdown. The results of the study confirm the existence of an intention-action gap regarding general healthcare measures, and it highlights the mitigating role of the context-related impediments on the engagement with healthcare measures.

The article from Mehrnaz Kouhihabibi, entitled "Feeling the Pulse of Trade in the Age of Corona: Artificial Intelligence and E-Commerce" provides an overview on the effects of the Coronavirus epidemic on the global economy, especially the world's major economies and countries most affected by the crisis. The study puts in light that future discussions should focus more on measuring the impact of COVID-19 on innovation, efficiency, teamwork and on collaboration, with an orientation towards common good as a purpose of brands and organizations.

The contribution entitled "Corporate Social Responsibility Practices in the Retail Sector: A Multiple Case Study Analysis of Us Retailers", from Laura Bravi, presents a longitudinal analysis on five American companies, leaders in the retail sector, as regards social responsibility practices. The study shows that long-term collective benefits is the main goal for large retailers and it is not just a matter of green/social washing initiatives.

Joseph O. Jiboku, Peace A. Jiboku and Adeyemi O. Babasanya are the Authors of the article entitled "Poverty and Unemployment in Nigeria: The Case for Advancement of Technical Vocational Education and Training (TVET)", that puts in light the lack of skilled human capital as one of the main reasons for increasing levels of poverty and unemployment in Nigeria. The study indicates the Technical Vocational Education and Training program as a strategy for addressing the issue.

The article entitled "The 'Torre Del Cerrano' Marine Protected Area and The European Charter for Sustainable Tourism in Protected Areas as an Ecotourism Management Tool", from Guido Capanna Piscè, proposes a critical analysis of the documentation produced by the Torre del Cerrano Marine Protected Areas (Italy), according to the European Charter for Sustainable Tourism (ECST) in Protected Areas. ECST is a voluntary management tool and certification that enables protected areas to develop sustainable tourism for the benefit of the environment, local populations, businesses, and visitors.

Huseyn Mammadov, with his contribution entitled "Car Price Prediction in the Usa by Using Linear Regression", proposes a model, based on linear regression, to predict car prices in the U.S market, in order to help new entrants to understand the pricing factors/variables in the U.S automobile industry.

The last article from Mario Risso and Andrea Paesano is entitled "Retail and Gamification for a New Customer Experience in Omnichannel Environment". The article aims at exploring the use of gamification to improve the customer experience in retailing, facing the new challenges of omnichannelling.

Finally, in this issue there is a book review that worth to be considered. The book is authored by Vasant Raval and its title is "Corporate Governance. A Pragmatic Guide for Auditors, Directors, Investors and Accountants" The book provides practical insights illustrating theory with recent cases, proving to be a great source of information for anyone that has to do with the ecosystem of corporate governance such as professional accountant, securities lawyer, economist, financial analyst, and auditors.

*Fabio Musso*

*Editor-in-Chief*

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# BRIDGING INTENTION-ACTION GAP FOR HEALTHCARE MEASURES DURING THE COVID-19 LOCKDOWN

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## Abstract

*The COVID-19 Pandemic has proven to be a challenge that forced everyone to rapidly adapt to a new way of distanced functioning and to adopt preventive measures. With a significant body of literature dealing with the general inconsistency between intention and action, also known as the intention-action gap, the present paper aimed better grasp the citizens' tendency to engage with general healthcare measures and the commitment to the COVID-19 safety measures recommended during the lockdown. Participants self-reported their conduct at the beginning of the COVID-19 lockdown (early March) and the ending of the COVID-19 lockdown (early May).  Descriptive statistics and non-parametric analyses testing were used. The preventive recommendations during the COVID-19 lockdown revealed an increased degree of efficient adoption compared to typical healthcare measures. Moreover, results are indicative of an increase in implied impediments between the beginning and the ending of the COVID-19 emergency period, without a notable broadening in the corresponding intention-action gap. This result was attributed to the commonalities between the COVID-19 emergency period and the established behavioural management strategies to reduce the intention-action gap, namely the intention actualization, "cheap talk" approach, "corrective entreaty" method, as well as "intentions implementation" strategy.*

## 1. Introduction

Failing to act according to one's intentions is a common observation since it is a recurrent barrier to reaching our aims and potential. Be it choosing a different career path or deciding on a difficult matter, it puts strains on our internal discipline and our mental resources. However, the aspect of our life that requires the most discipline is probably our health. This can be achieved by adopting a healthy diet, physical exercises, a sufficient amount of sleep, and a suitable work-life balance, which, for many of us, is in itself a challenge. It seems that, despite all the

knowledge we have on which preventive measures we should adopt and how we should implement them, we are still bound to fail. For instance, a study conducted in the health domain shows that between 26% and 57% of respondents did not carry their intention to use condoms, exercise, or undergo cancer screening (Sheeran, 2002). Unhealthy eating is another illustration of a weak intention-behavior link (Sheeran & Conner, 2019), leading to major health consequences such as a high risk for cardiovascular disease, diabetes and obesity (World Health Organization, 2019).

The recent COVID-19 virus outbreak rapidly imposed new "keep-healthy" objectives. Our present inquiry is to find whether people succeeded at acting as intended more effectively than they would do otherwise. Even if a pandemic is a rare and very specific event, the social reaction to it presents general elements that can be assimilated as recommendations for crisis management and the management of collective behavior. To be able to deduce and understand these elements, we chose a delimited social context -- the state-declared lockdown between March and May. We will commence by exposing the everyday challenges to act accordingly to stated intentions, with practical recommendations to accomplish health-related goals. Then, we will discuss the COVID-19 lockdown context as having the potential to drive desired behavior by mimicking the mechanisms of these recommendations. Finally, we will investigate the actual efficacy of the COVID-19 lockdown by analyzing the surveyed responses about general healthcare measures and the specific situation of the COVID-19 virus outbreak.

## 2. Literature Review

### 2.1 *Challenges and Recommendations for General Healthcare*

People often fail to act according to their stated intentions. Many studies identified a difference in the way people regard hypothetical situations compared to actual situations (Ajzen et al., 2004; List, 2001). The perpetual incongruence between intention and action is sustained with evidence from economic, environmental, and medical studies (Ajzen et al., 2004; Penn & Hu, 2018).

Early takes on the matter attribute the intention-action incongruence to the different perceptions of symbols and reality (LaPiere, 1934; Blumer, 1955). LaPiere (1934) claims that "there is no necessary correlation between speech and action, between response to words and to the realities they symbolize" (p. 231). In other words, the author proposes that intentions belong to a symbolic world, while actions are responses to reality. In our opinion, LaPiere's argument still stands, with recent studies arguing that there is a qualitative difference between hypothetical and real context as people construct them differently. Firstly, hypothetical situations activate fewer unfavourable considerations as people overlook real barriers. For example, when bidding in a hypothetical auction, people neglect the decisive distress of opportunity cost (the things that cannot be bought anymore after money is spent) experienced in the real situation (List, 2001). Secondly, beliefs are variant across context -- a theory known as the belief-disparity hypothesis (Ajzen et al., 2004). Action consistent with intentions is only expected when beliefs are congruent between hypothetical and real contexts.

Gershman et al. (1999, October) propose an explanation of the incongruence between the digital and physical world through three major discontinuities: physical discontinuities, information discontinuities, and awareness discontinuities. Adapting Gershman's model we can identify three types of mental processing barriers that hinder actions to match intentions: temporal barriers, awareness barriers, and information barriers. The current literature on hyperbolic discounting suggests that time is a notable barrier as the passage of time affects perception and changes choices (Quaife et al., 2018). Ensuring time proximity between intention and action together with intention actualization, and progress monitoring are crucial

parts of goal-achieving strategies (Sheeran & Webb, 2016). Studies show that intention actualization can be effectively achieved through low-cost communication strategies such as reminders (Hand et al., 2019). The effectiveness of reminders has been shown especially effective in healthcare contexts where phone calls increased medical appointments attendance by 12%-17% (Sawyer et al., 2002; Lee et al., 2003, Roberts et al., 2007). Besides its direct implications, time also fosters the development of another potential barrier - habits. Bad habits (e.g. wasteful energy consumption) often contribute to the inefficiency to act on good intentions (Lee et al., 2020).

By addressing awareness barriers, some strategies are shown effective in reducing the intention-action gap: "cheap talk" approach, "corrective entreaty" method, and "implementation intentions" strategy. All these methods employ awareness by highlighting the barriers experienced during an actual situation. The "cheap talk" approach comprises a script presented just before expressing an intention (List, 2001). The script describes the drawbacks experienced in an actual situation. Similarly, before intention formation, the "corrective entreaty" method exposes the conceptual problem of a disparity between a fictional and a real scenario (i.e. intention-action gap, hypothetical bias, or belief-disparity; Ajzen et al., 2004). Finally, the "implementation intentions" strategy that emphasizes an intention already expressed and provides in detail the when, where, and how of future action (Kersten et al., 2015; Saddawi-Konefka et al., 2016). It may also create an action framework where individuals trying to achieve a desirable outcome are forced to take into consideration potential adversities. While the first two approaches consist of brief exposure to the practical and conceptual impediments of real contexts, the latter represents a more in-depth and systemic understanding of barriers, limitations, and ways to overcome them. These methods boost the affective "cold" persona to appreciate how actual "hot" situations are experienced by considering those barriers that are easily overlooked from a distance -- usually an emotional distance between the current self and future self (Loewenstein, 2005; Kang & Camerer, 2013; Dillard et al., 2020).

For more cognitively complex barriers concerning information and context understanding, studies appeal to knowledge. Hidalgo-Baz et al. (2017) suggest that knowledge helps transmit attitudes to behaviours by overcoming the lack of confidence or the misinterpretation of actual contexts. Some authors promote knowledge as a means to understand an actual situation's consequentiality that accounts for people's understanding that their reported attitudes and actions affect policy and the common good. Adequate risk perception is proven crucial when considering breast self-examination, physical exercise, seat-belt used, or dietary behaviours (Schwarzer & Luszczynska, 2008). Furthermore, optimism bias can have a crucial role in adopting health-conserving strategies. (Druica et al, 2020). The authors underline the existence of several distinctions among the conditional particularities of the interviewed, which led to dissimilar healthcare-related approaches under optimism bias. The study also points out several differences in regard to the samples, namely, for the Romanian subjects the level of optimism bias decreased as the level of education was higher, in contrast with the existing literature, while the authors mention in the case of Italy that lack of clarity from the official bodies led to confusion in terms of assessing the healthcare impact of the pandemic, regardless of their educational level.

Asides from the general mental processing barriers exposed so far, we must also note the observational commonality through which multiple individual characteristics contribute to the differences in perception and behaviour. The existing literature on the intention-action gap presents it as a rather general tendency, independent of socio-economic factors. The majority of studies show that neither gender nor income broadens the intention-action gap (Regan & Fazio, 1977; Mjelde et al., 2012; Penn & Hu, 2018). However, some argue that age and education influence the bias ratio (Mjelde et al., 2012) and other evidence suggests that even

gender affects the magnitude of hypothetical bias (Brown & Taylor, 2000; Mitani & Flores, 2014). Worth mentioning is also that, despite increased information availability, people's decision-making capacity is not necessarily keeping up with the expectation of rational decision making and, at the same time, pointing out the increasing importance of social media and online vectors of influence, thus increasing the credibility and authority of certain actions depending on the social network. Such upcoming social opportunities may have already had a lasting impact on how we process and handle an increasingly dynamic and interconnected world. (Balau, 2018). Therefore, further investigation of individual characteristics and the intention-action family of biases is recommended

### 2.2    *COVID-19 Lockdown Potential to Reduce Intention Action Gap*

We expected the lockdown to underline strong behavioral engagement with intention as the virus outbreak meets multiple conditions outlined in the above-mentioned strategies to reduce the intention-action gap. Moreover, we expected to identify the manifestation of individual characteristics -- or the lack of manifestation, for that matter -- as underlined in previous literature.

The social reaction to the COVID-19 virus outbreak presents specific features considered effective in diminishing the distance between intention and action. We expected that both self-interest and common good conservation when facing a collective threat with great consequences play the role of the invariant belief between the hypothetical situation and the actual situation. The solidarization tendency of human societies facing natural disasters such as epidemics is well documented in the social psychology literature (Dawson & Verweij, 2012; Prainsack & Buyx, 2012; Lee & You, 2020). Together with the understanding of actions' consequentiality and their impact on the common good, we believe that the characteristic of adequate risk perception was fulfilled during the lockdown.

Time proximity between intention and action, together with intention actualization, was motivated during the emergency period through constant official communication comprising reminders about safety measures and adequate behaviour. Informative communication and diverse scenario descriptions (e.g. how to behave in a supermarket or public spaces) provided during this time are very similar to the established methods in addressing awareness, namely the "cheap talk" approach, the "corrective entreaty" method, and the "implementation intentions" strategy. The informative programs released on diverse communication channels (radio, television, or social media) confronted citizens with specific situations and potential adversities. Citizens had the means to understand the barriers, limitations, and ways to overcome them. Besides the appeal to awareness, complex information concerning the pandemic was highly promoted, all official declarations called upon reliable data and scientific studies.

## 3. Overview of the Current Study

The current study proposes a comparative inquiry of the intention-action gap concerning general healthcare measures (e.g. maintaining good health, having regular health check-ups, seeking out to prevent illness or injuries) and COVID-19 safety measures recommended during the state-declared lockdown due to the virus outbreak. To answer this question, we propose a study where people are surveyed about their attitude towards general healthcare measures and towards the specific situation of the COVID-19 virus outbreak. In both cases, participants' behavior will also be assessed.

We advance the following hypotheses:

H1: *There is a broader gap between intention and action regarding general healthcare measures than COVID-19 safety measures.*

H2: *As implied impediments concerning general healthcare measures increase, the intention to perform a health-beneficial activity decreases. Similarly, actual engagement decreases as implied impediments increase.*

H3: *Perceived impediments will increase between the beginning and the ending of the COVID-19 lockdown, but the engagement with the COVID-19 safety measures will not simultaneously decrease.*

Additionally, we will examine the potential impact of socio-economic factors (i.e. gender, income, age, education) on the magnitude of the intention-action gap concerning general healthcare measures.

## 4. Data and Methods

### 4.1 Procedure and Participants

A total of 1244 respondents voluntarily participated in an online survey, consisting of a few questions structured as presented in Section 2.2 Materials. Data was collected via Facebook and Linkedin using convenience sampling (Kitchenham & Pfleeger, 2002; Heckathorn, 2011). and snowball sampling methods (Heckathorn, 2011). Even with a non-random initial sample, snowball sampling is shown to approach equilibrium independent of the convenience sample (Heckathorn, 2011). The online surveying approach was especially suitable during the COVID-19 lockdown considering that most activities transferred online (Dockery & Bawa, 2020).

So, we can observe respondents' intention and action towards preventive behavior concerning the COVID-19 lockdown, two different samples of participants completed the survey at the beginning of the COVID-19 lockdown (early March) and the ending of the COVID-19 lockdown (early May). The first sample of 962 participants consisted of 24.6% were males, aged 16 to 79 years (M= 29, SD = 12.8). In terms of educational attainment, most participants (64.8%) completed secondary education, the rest completed higher education (35.2%). The second sample consisted of 282 participants, of which 21.6% males. Participants aged 10 to 79 years (M=20.5, SD = 13.3). Out of 282 participants, 98 completed higher education (34.8%), the rest completed secondary education. Table 1 summarizes the descriptive statistics.

### 4.2 Materials

The online survey began with participants being informed about the confidentiality of the data collected and by expressing their agreement of voluntary participation. Subsequent questions concerned individual characteristics, namely age, gender, income, and education.

The second set of questions assessed the intention and the action towards general healthcare measures on a 1-7 Likert scale. The questions imply different levels of engagement, both for intention and for action. Each level of engagement assumes a supplementary amount of effort. All items are presented in Table 2.

Table 1 − Demographics and socioeconomic variables

| Variable | First Sample | Second Sample |
|---|---|---|
| Age | Min = 16, Max = 79, M = 29 (SD = 12.8) | Min = 10, Max = 79, M = 20.5 (SD = 13.3) |
| Gender: | | |
| Female | 75.4 % | 78.4 % |
| Male | 24.6 % | 21.6 % |
| Highest level of completed education: | | |
| Secondary education | 64.8 % | 65.2 % |
| Higher education | 35.2 % | 34.8 % |

Table 2: Three Levels of Engagement - Intention and Action

| | Intention | Action |
|---|---|---|
| First Level of Engagement | Maintaining good health is extremely important to me. | I search for new information to improve my health. |
| Second Level of Engagement | I want to discover health problems early. | I seek out ways to prevent illnesses and/or injuries. |
| Third Level of Engagement | I feel it is important to carry out activities which will improve my health. | I have regular health check-ups even if I am not sick. |

Two of the questions presented in the second set, one comprising the intention and the other describing the action, refer to the same specific behavior: (1) *"I want to discover health problems early."* and (2) *"I have regular health check-ups even if I am not sick."* A distance between the responses registered for these questions would determine the intention-action gap regarding general healthcare measures **(H1a).**

The third set of questions measured, on a 1-7 Likert scale, the attitude (intention and action) towards safety measures during the COVID-19 lockdown. The intention was assessed through the following item: *"I am confident I can adopt preventive behaviors against Covid-19 correctly."* The actual engagement with the corresponding behavior was surveyed through the following statement: *"I have adopted preventive behavior against Covid-19."* As in the case of general healthcare measures, these two questions comprise the intention and the action regarding the same specific behavior. A distance close to zero between the responses would indicate that the intention-action gap was effectively reduced during the COVID-19 lockdown **(H1b).**

When assessing intention towards general healthcare (second set of questions), the decreasing agreement between levels of engagement is meant to underline the declining interest (or intention) as implied impediments increase **(H2a).** Similarly, when surveying participation

with different actions, a decreasing agreement between levels of engagement indicates that actual engagement with health beneficial actions decreases as implied impediments increase **(H2b).**

Perceived impediments during COVID-19 lockdown were assessed considering five types of barriers proposed by extant literature: social pressure or stigma (Williams, 2002; Smith et al., 2000; McLeod, 2008), limited time (Sheeran & Webb, 2016; Quaife et al., 2018), limited resources (Moghavvemi et al., 2015), general physical and psychological discomfort (Shelus et al., 2020; Perna et al., 2020). The items addressing these barriers are the following: *"Other people will consider me weird, if I adopt preventive behaviors against Covid-19"* (social pressure), *"Adopting preventive behavior against Covid-19 will take too much time"* (limited time), *"I don't have the equipment to adopt preventive behavior against Covid-19"* (limited resources), *"Adopting preventive behavior against Covid-19 will create physical discomfort"* (general physical discomfort), *"Adopting preventive behavior against Covid-19 will hinder me."* (general psychological discomfort). As an indication of the increasing perceived impediments between the beginning and the ending of the COVID-19 lockdown, we expected the agreement with each of these statements to increase between the first and the second data collection **(H3).**

### 4.3 Method

Given that the distribution of our variables significantly departed from the normal distribution, non-parametric tests were employed to investigate the median differences proposed through the research hypotheses. Considering the increasing emphasis on the importance of effect sizes, all results are reported both on means of p-values and effect sizes (Sullivan & Feinn, 2012; Kelley & Preacher, 2012). We conducted our data analysis using Rstudio software, version 4.0.3.

## 5. Results

To test the first set of hypotheses regarding intention, action, and intention-action gap concerning general healthcare measures and COVID-19 safety measures, Wilcoxon Signed Rank tests were employed. For the intention-action concerning general healthcare measures difference the results revealed a significantly stronger agreement to intention than to action, both at the beginning of the COVID-19 lockdown (W = 236620, $p < 2.2e-16$, r = 0.65) and at the ending of the COVID-19 lockdown (W =16746, $p < 2.2e-16$, r = 0.65). Figure 1 shows the response distributions, both at the beginning and the ending of the COVID-19 lockdown.

Figure 1 − Intention-Action Gap Concerning General Healthcare Measure

**The beginning of the COVID-19 lockdown**



I want to discover health problems early.

I have regular health check-ups even if I am not sick.

**The ending of the COVID-19 lockdown**

I want to discover health problems early.

I have regular health check-ups even if I am not sick.
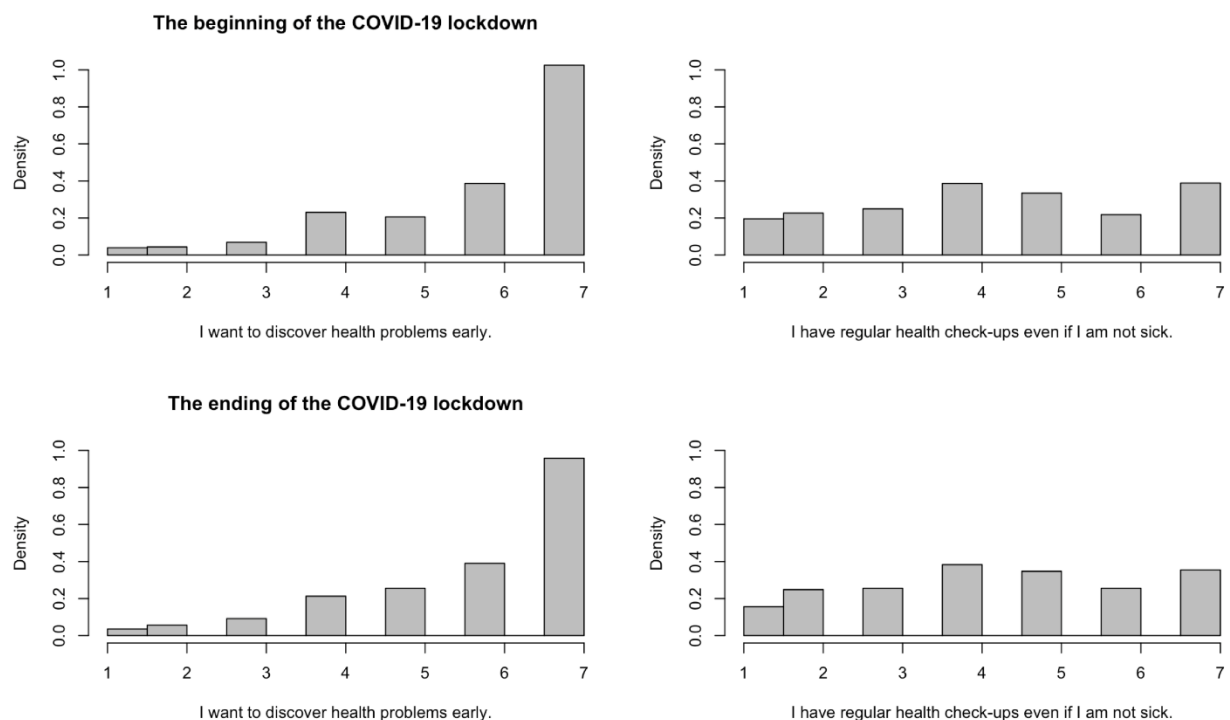
No intention-action gap was revealed concerning the safety measures during the COVID-19 lockdown at the beginning of the period (W= 36966, p-value = 0.12, r = 0.06) or at the end of the period (W = 3677, p-value = 0.08, r = 0.1). Figure 2 shows the response distributions, both at the beginning and the ending of the COVID-19 lockdown.

To test the impact of implied impediments on the intention towards general healthcare measures, we compared the responses to three levels of engagement. Figure 3 summarizes the responses registered for each level, at the beginning and the ending of the COVID-19 lockdown. Results revealed a significant decrease of the intention to engage in general healthcare measures from the first to the second level of engagement, both at the beginning (W = 563020, p-value < 2.2e-16, r = 0.45) and the ending of the COVID-19 lockdown (W = 47980, p-value = 1.153e-06, r = 0.43). Another significant decrease of intention to engage in healthcare measures was disclosed at the beginning of the COVID-19 lockdown, between the second and the third level of engagement (W = 532930, p-value = 6.182e-10, r = 0.25). The same decrease in intention was not revealed to be significant at the ending of the lockdown ( W = 42142, p-value = 0.1, r= 0.1). Still, there is a significant decrease between the first and the second level of engagement, even at the ending of the lockdown (W = 50245, p-value = 1.279e-09, r = 0.61).

Figure 2 − Intention-Action Gap Concerning COVID-19 Safety Measures.
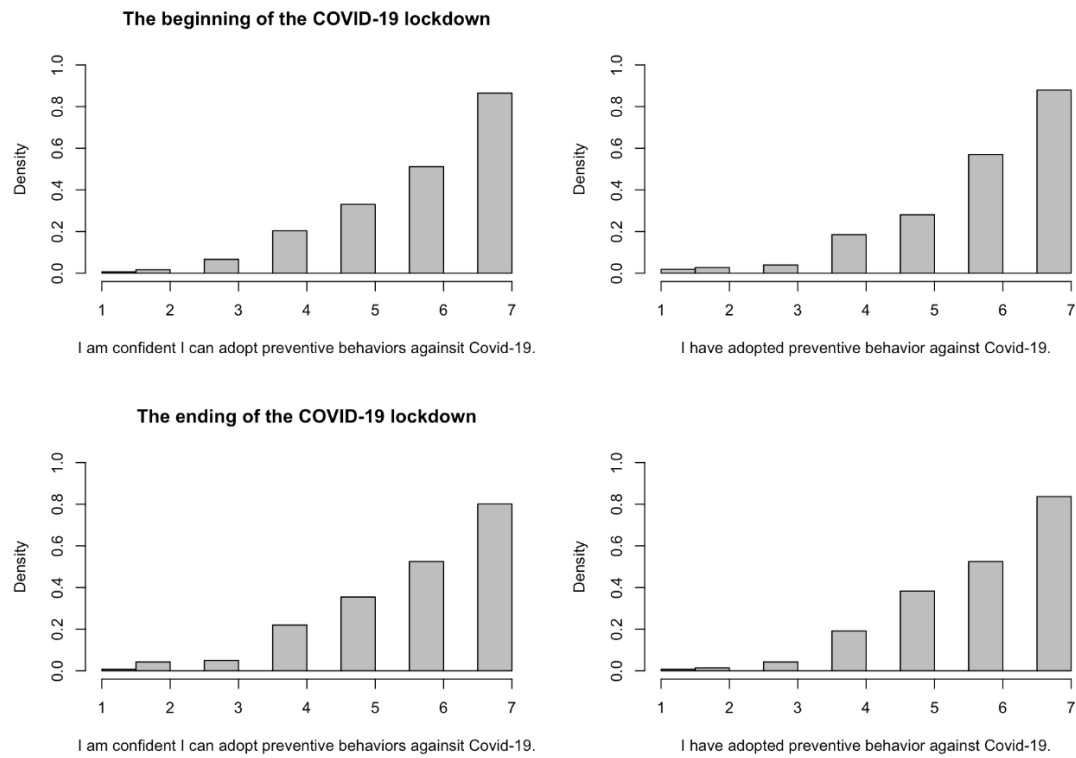


Figure 3 − Intention Statements, the Three Levels of Engagement
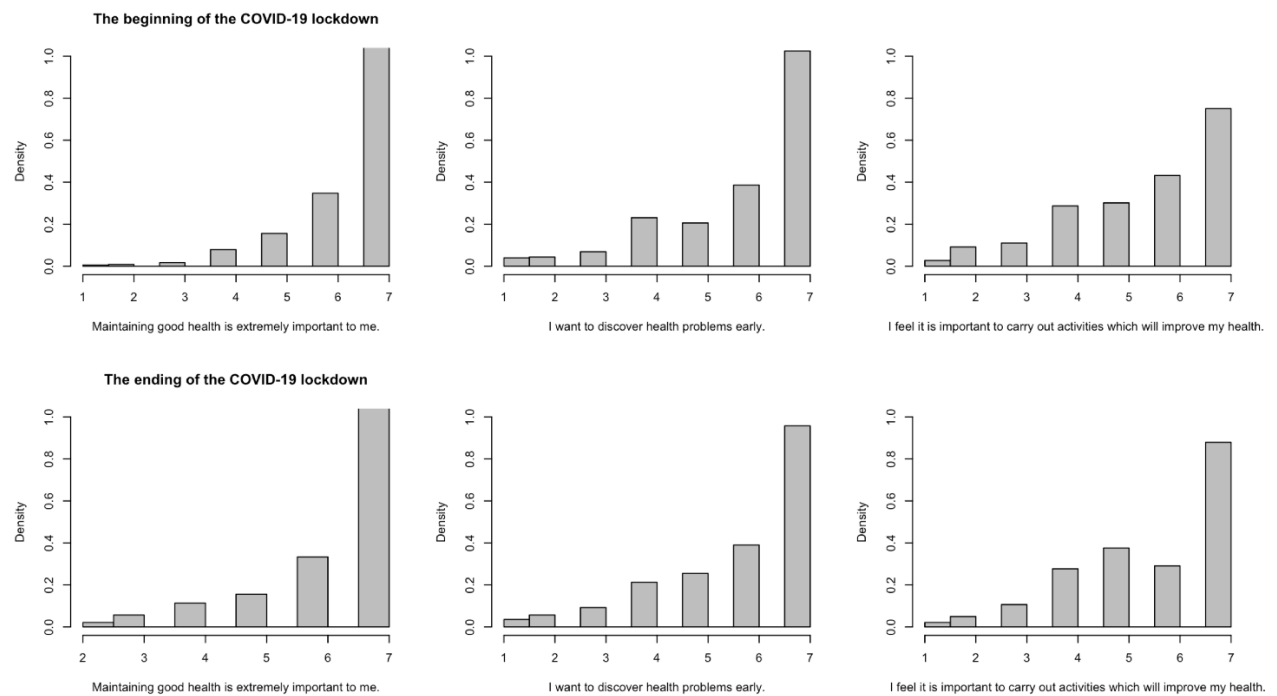
To further test the impact of impediments on the actual engagement with general healthcare measures, we compared the responses to three levels of engagement. Wilcoxon Signed-Rank tests were employed.

Figure 4 shows the responses registered for each level, at the beginning and the ending of the COVID-19 lockdown. Results revealed a significant decrease of actual engagement with general healthcare measures from the first to the second level of engagement, both at the beginning (W = 559360, p-value = 3.618e-16, r = 0.41) and the ending of the COVID-19 lockdown (W = 50196, p-value = 1.98e-08, r = 0.47). A significant decrease of actual engagement was also exposed at the beginning of the COVID-19 lockdown, between the second and the third level of engagement (W = 482610, p-value < 0.05, r = 0.1). The same decrease in actual engagement was not revealed to be significant at the ending of the lockdown (W = 41317, p-value = 0.2, r= 0.07). A significant decrease of actual engagement, between the first and the third level, holds at the ending of the lockdown (W = 51664, p-value = 1.93e-10, r = 0.5).

Figure 4 − Action Statements, the Three Levels of Engagement
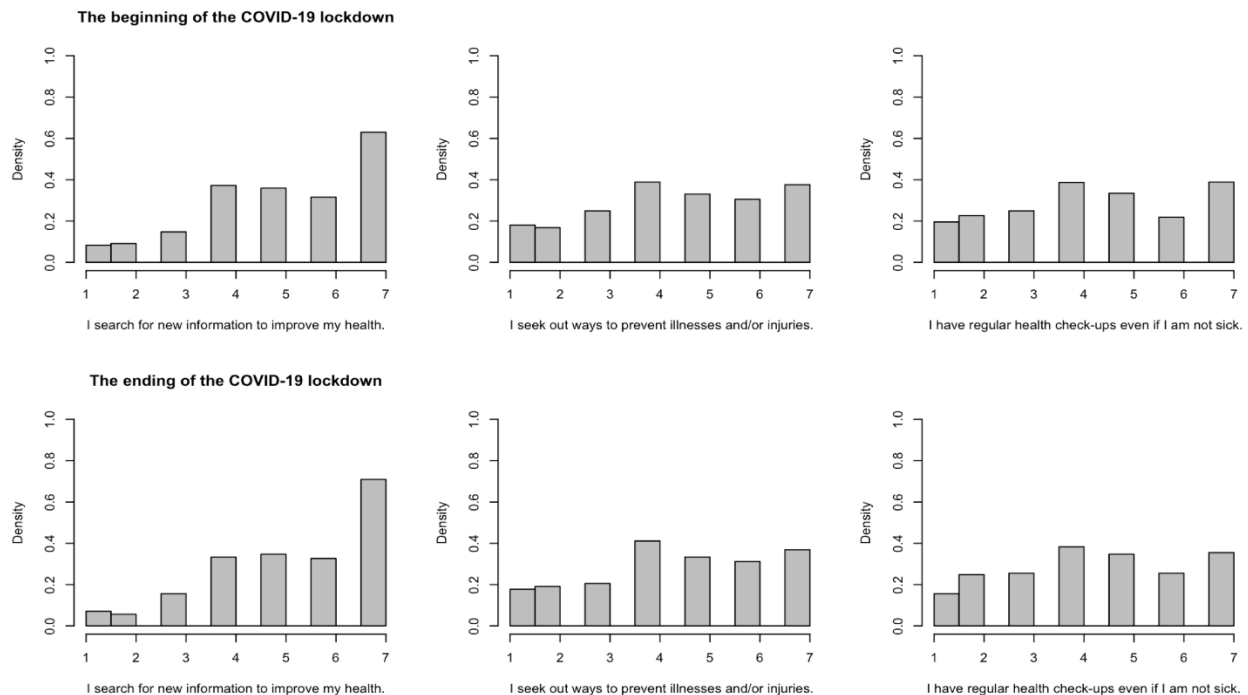


Concerning the COVID-19 safety measures, dependent 2-group Wilcoxon Signed Rank tests revealed that the five perceived impediments increased from the beginning to the end of the COVID-19 lockdown (social pressure: W = 116010, p-value = 4.564e-05, r=0.105; limited time: W = 99408, p-value = 9.052e-15, r = 0.193; limited resources: W = 122410, p-value < 0.01, r= 0.071; general physical discomfort: W = 95802, p-value < 2.2e-16, r= 0.213; general psychological discomfort: W = 106010, p-value = 1.047e-11, r=0.159).

To further investigate the impact of the socio-economic factors, namely gender, age, income, and education, on the magnitude of the intention-action gap concerning general healthcare measures, an index of distance was calculated as the difference between the agreement to intention and agreement to action. One index was calculated for the first data collection (the beginning of the COVID-19 lockdown) and another for the second data collection (the ending of the COVID-19 lockdown). There is no significant difference between the median magnitude of the two indexes (W = 143010, p-value = 0.16, r = 0.04).

To investigate the impact of gender on the magnitude of the intention-action gap, 2-group Mann-Whitney U tests were conducted. No significant difference between genders was revealed at the beginning of the COVID-19 lockdown (W = 84550, p-value = 0.7, r = 0.012) or at the ending of the COVID-19 lockdown (W = 7517.5, p-value = 0.16, r = 0.084). Nor does age have a significant impact on the magnitude of the intention-action gap, with small correlations between age and distance indexes both for the first data collection (r = -0.14) and the second data collection (r = -0.05).

Kruskal–Wallis tests were conducted to examine the impact of income on the magnitude of the intention-action gap. Considering the first data collection, the test revealed a significant difference between groups concerning the median intention-action distance (Kruskal-Wallis X-squared = 14.222, df = 6, p-value < 0.05, eta squared = 0.009). However, with seven groups of comparison (7 levels of income) the chance of observing a rare event increases and, consequently, the likelihood of incorrectly rejecting a null hypothesis (a Type I error) increases. The Bonferroni correction compensates for that increase. Further, Dunn's pairwise tests were carried out for the seven pairs groups using Bonferroni correction. No significant difference between groups was revealed. For the second data collection, Kruskal–Wallis test displayed no between-group difference (Kruskal-Wallis X-squared = 8.6325, df = 6, p-value = 0.2, eta squared = 0.01).

Two-group Mann-Whitney U tests were conducted to examine the impact of education on the magnitude of the intention-action gap. In the first data collection (the beginning of the COVID-19 lockdown), a significantly higher difference between intention and action was revealed for the group that completed higher education compared to the group with secondary education (W = 117470, p-value < 0.05, r = 0.09). The difference did not hold significance for the second data collection (the ending of the COVID-19 lockdown; W = 8987, p-value > 0.9, r = 0.003).

## 6. Discussion

The first hypothesis was confirmed — there is a broader gap between intention and action regarding general healthcare measures than COVID-19 safety measures. When examining the attitude regarding general healthcare measures, results show that there is a significant difference between the responses registered for the statement comprising the intention and the one describing the corresponding action. The distance between these indicates an intention-action gap regarding general healthcare measures. This effect is present both at the beginning and the ending of the COVID-19 lockdown, meaning that the specific event did not have an impact on the intention-action gap regarding general healthcare measures. When considering the safety measures during the COVID-19 lockdown, no significant intention-action gap was revealed even if there was a significant increase of all five perceived impediments, namely social pressure, limited time, limited resources, general physical and psychological discomfort. The lockdown underlines strong behavioral engagement with intention. We argue that the social reaction to the virus outbreak meets multiple conditions specific to endorsed strategies to reduce the intention-action gap.

As proposed by the second hypothesis, the intention to engage in general healthcare measures decreases as implied impediments increase. Similarly, the actual engagement with health beneficial actions decreases as implied impediments increase. However, the decline is more consistent at the beginning than at the end of the COVID-19 lockdown. When dividing the increase of impediment into three levels of implied effort, we observe that at the beginning of the lockdown, both intention and actual engagement with general healthcare measures decrease from the first to the second level and from the second to the third level. At the ending

of the lockdown, there is no significant decrease between the last two levels of effort. This result can be explained by higher engagement motivated by the generalization of the interest and involvement during the COVID-19 virus outbreak.

The engagement with healthcare is most suggestively underlined by the confirmation of the third hypothesis. Even though the perceived impediments increase between the beginning and the ending of the COVID-19 lockdown, this was not followed by a decrease in the commitment to adhere to COVID-19 safety measures.

Further analysis meant to examine the influence of socio-economic factors on the magnitude of the intention-action gap concerning general healthcare measures shows that gender, age, and income have no significant impact. These results are supported both at the beginning and the ending of the COVID-19 lockdown. Even if education seems to play a marginal role, with a significantly higher difference between intention and action was revealed, at the beginning of the lockdown, for the group that completed higher education compared to the group with secondary education, the difference holds under effect sizes too small to be considered ($r < 0.1$). Moreover, the difference did not hold significance at the end of the lockdown.

### 6.1 Theoretical Implications

The results provide insights into the intention-action gap effect and the ways to diminish it. It provides a comparative approach between two different health contexts and underlines the differences. Besides underlining the gap between intention and action, it discusses the coexistent gap at the intentional and actional level based on increasing impediments or implied effort. This way, in addition to the confirmation of different findings from extant literature in the context of the COVID-19 pandemic, it puts in the same pictures multiple results from the diverse literature on the intention-action gap.

The investigation of the influence of socio-economic factors on the magnitude of the intention-action gap shades light on contradicting literature. Our results show that gender, age, income, and education have no significant impact on the magnitude of the intention-action gap.

### 6.2 Practical Implications

Revealing efficiency in diminishing the intention-action gap concerning healthcare, the COVID-19 lockdown proposes some recommendations for strong behavioral engagement with intention. Even if the global virus outbreak represents a rare and specific event, we can identify general constituent elements. Moreover, the identified conditions to reduce the intention-action gap are specific to strategies endorsed by extant literature, thus making the generalization valid. In other words, the COVID-19 lockdown is a rare event but not a phenomenon isolated from existing knowledge about human behavior and society.

This period's efficiency to avert the three types of mental processing barriers that hinder actions to match intentions (temporal barriers, awareness barriers, and information barriers) can be classified into three major elements: clarity, consistency, and authority.

Clarity was assured both at the intentional and actional level. Both the size of the health risk of the virus outbreak and the consequentiality of nonconforming behavior on the common good were conspicuous. Adequate risk perception and consequentiality understanding are proven crucial for behavioral engagement with actions that are frequently overlooked (Schwarzer & Luszczynska, 2008; Hidalgo-Baz et al., 2017). Citizens were regularly informed through all media communication channels about the existing threat to public health and short programs were describing the adequate behavior -- wearing masks, using alcoholic disinfectants, frequent hand washing. Moreover, the appropriate behavior was described according to the different social contexts -- public spaces, public transportation, parks,

supermarkets. Besides bringing clarity, these communications acted as reminders and intention actualization, also shown effective in reducing the intention-action gap (Sawyer et al., 2002; Lee et al., 2003, Roberts et al., 2007; Hand et al., 2019). Creating a code of good practice from the beginning of the pandemic reduced the formation of bad habits and ensured time proximity between intention and action (Sheeran & Webb, 2016), while prompt governmental response combined with transparent and actionable guidelines help implement early means of pandemic control and diminish the possibility of a widespread healthcare crisis (Hou et al., 2020)

In addition to the consistency between communications, stability was also ensured by invariant beliefs and purposefulness. Communities showed solidarization in the face of the threat, a major factor in overcoming impediments (Dawson & Verweij, 2012; Prainsack & Buyx, 2012). Being realistic about potential barriers is crucial in fulfilling intention (List, 2001; Ajzen et al., 2004; Kersten et al., 2015; Saddawi-Konefka et al., 2016). People were informed about potential impediments. The informative programs confronted citizens with specific situations and potential adversities. Citizens had the means to understand the barriers, limitations, and ways to overcome them. This approach resembles established methods in addressing awareness, such as the "cheap talk" approach, the "corrective entreaty" method, and the "implementation intentions" strategy. Therefore, the accurate understanding of a situation -- or the realism of the situation -- is a fruitful consequence of clarity and consistency.

Another central element of this period is authority, ensured both as the formal authority and scientific authority. As the COVID-19 period of emergency was a state-declared situation, it held the validity of legal importance. On top of that, complex information concerning the pandemic was highly promoted and called upon reliable data and scientific studies.

Therefore, based on values such as clarity, consistency, and authority, the strategies employed during the COVID-19 lockdown successfully mimicked established strategies to reduce the intention-action gap, among which we mention the "cheap talk" approach, the "corrective entreaty" method, the "implementation intentions" strategy, intention actualization through reminders, scientifically reliable communication, ensuring belief invariance and purposefulness. These values can be assimilated as managerial principles and the strategies proposed as recommendations for crisis management and the management of collective behavior. This way, the particular situation of the pandemic crisis can be illustrative for efficient ways to manage challenging situations from the perspective of the intention-action gap.

## 7. Conclusions

A rich body of research literature explored the action failure of individuals following their intentions and an even richer philosophical tradition. We often fail to act according to our intentions, be it for economic, environmental, or medical purposes. The current study confirms the existence of an intention-action gap regarding general healthcare measures. It also underlines the mitigating role of implied impediments on the intention and the actual engagement with healthcare measures, given the context of the COVID-19 pandemic.

The intention to engage in general healthcare measures decreases as implied impediments increase. Similarly, the actual engagement with health beneficial actions decreases as implied impediments increase. Nevertheless, a consistent decline is observable during the beginning, rather than the end of the COVID-19 lockdown. This result can be explained by the generalization of the interest and involvement with healthcare motivated by the COVID-19 virus outbreak. Indeed, during this period people succeed to act as intended more effectively than they usually do. Our results show that the COVID-19 virus outbreak motivated more consistency in behaviour with no significant distance between intention and action.

We argue that the COVID-19 lockdown presents specific features considered effective in diminishing the distance between intention and action. The clarity, consistency, and authority proved during the lockdown public communication resemble established methods to reduce the intention-action gap, such as the "cheap talk" approach, the "corrective entreaty" method, and the "implementation intentions" strategy. On top of that, intention actualization through reminders, scientifically reliable communication, and inspiring purposefulness contributed to strong behavioral engagement.

Even if the study discusses a rare and specific event, the social reaction to it presents general elements that can be assimilated as recommendations for crisis management and the management of collective behavior. The applicability of these recommendations is justified all the more as gender, age, and income are revealed to have no significant impact on the magnitude of the intention-action gap concerning general healthcare measures.

The present findings may contribute to a larger body of research concerning social-psychological factors which facilitate acting in desirable manners and foster both desirable societal participation and an efficient organizational climate if we extend it to managerial contexts. Furthermore, recent research also showed that subjects are more prone to act in positive behaviors like knowledge sharing inside an organization (Bock et al., 2005) when the source of the motivation is intrinsic. A cross-cultural research process would also be indicated to better comprehend the various fallacies which inadvertently may arise when individuals have to decide upon preventive measures.

### 7.1. Limitations

Framing the crisis between its beginning and ending period would have been more conclusive through a comparative perspective with a post-emergency measurement. With all the other conclusions remaining unchanged, a post-emergency measurement would have contributed to the knowledge of the impact of state authority. Future studies could focus on this aspect.

An objection may be based on the specificity of the event considered that leads to faulty generalization. As argued before, even if a pandemic is a rare and specific type of crisis, social crises share common traits. Therefore, specific crisis analysis can be insightful for the management of other crises.

Some inconsistencies between the results observed for the beginning and the ending of the COVID-19 lockdown can be explained through the impact of the emergency period itself. However, results inconsistency can stand on small effect sizes as revealed in our analysis. Further investigation on the role of impediments is needed.

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# FEELING THE PULSE OF TRADE IN THE AGE OF CORONA: ARTIFICIAL INTELLIGENCE AND E-COMMERCE

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## *Abstract*

*COVID-19 directly has had a negative economic impact on the supply chain, demand, financial markets, investment, production, and international trade, whose consequences could change the geopolitical position of countries in the world. Quarantine policy which has been associated with changing the working pattern and consumption of users, although it has harmed some economic sectors, has been able to save countries from the risk of complete closure with ICT capacities. This article attempts to provide an overview of the effects of the Coronavirus epidemic on the global economy, especially the world's major economies and countries most affected by the crisis, in general, possible development scenarios, and how the epidemic will affect society and examine the global economy. Next, by examining statistics and information published from reputable global sources on the current state of the Coronavirus epidemic, the effects of the virus epidemic on important sectors of the global economy, such as financial markets, labor market, energy market, and travel and tourism industry are discussed and reviewed. Finally, in order to identify the various economic strategies for managing the effects of this crisis, the economic policies of different countries in the face of the coronavirus epidemic were briefly reviewed.*

## 1. Introduction

The year 2020 will be remembered as the year of the COVID-19 pandemic, the first time that nearly any country on the globe was forced to briefly confine individuals, close businesses, and control human activity to reduce physical encounters (Chen et al., 2021; Craven et al., 2020; Zhang, et al., 2020a; Xu et al., 2020). The COVID-19 pandemic, a massive and unexpected phenomenon, proved to be a significant re-shifting factor in social (Gong et al., 2021) and economic life as we know it, as shown by a changing workforce, demand metamorphosis, supply chain shocks, and resulting shifts in business models. Beginning in January 2020, businesses all over the world had several workers placed on lockout, big supply chain challenges on a wide perspective, even, in some cases, infiltrations to act, that had not yet happened before and in the record (Patnaik et al., 2021; Alfaro & Jeong 2020). Customers'

ostensible physical encounters, as in the hospitality, transport, service providers, music, and entertainment sectors. The key to becoming resilient in such a challenging environment is to adapt five qualities - resolve, resilience, return, reimagination, and reform to four strategic areas - recovering revenue, rebuilding operations, rethinking the organization, and accelerating the adoption of digital solutions - while adapting marketing strategies and reorganizing the organization (Accenture, 2020). Only 15% of CEOs worldwide declared feeling after the first months of the pandemic, which is consistent with declining corporate performance in the first quarter of 2020 and a severe negative impact on the global economy (Afshar Jahanshahi et al., 2018). One of the ways to deal with these issues is to be more agile. Models with a consumer theme; However, adopting more competitive and cost-effective production methods, as well as more efficient and cost-effective supply chains, remains the first step in recovering sales before and after the pandemic (Taherinia et al., 2021). The increasing development of information and communication technology has created a wide impact on business processes (Eizi et al., 2013). The world economy took shortness of breath with the coronavirus outbreak. According to the Wall Street Journal on March 1, 2020, the coronavirus is different, and almost no company is safe. Businesses are affected by numerous external invoices. But none had as quickly affected supply and demand in many industries as much as the coronavirus. The supply chain of many major companies in the world has been in trouble and has negatively affected businesses (Bartsch et al., 2020).

Looking at the world's English-language newspapers, it can be said that many businesses around the world have lost their previous market due to the fear of the spread of the coronavirus. It may be said that the tourism industry in the world and educational services that need to be attended, such as free schools, health tourism, HoReCa (Hotel/Restaurant/Cafe) international trade have seen the most damage from Corona. However, some experts around the world believe that online businesses and e-commerce have experienced the least negative impact compared to other industries (Obrenovic et al., 2020; Altman, 2020).

### 1.2    *Coronavirus and the Possibility of a Global Economic Crisis*

Given the widespread impact of corona on the world economy and businesses around the world, there is a possibility of another economic crisis, such as the 2007-2008 financial crisis in the world. This paper, with a general view on definitions and principles of internet marketing and sales and e-commerce, their advantages and disadvantages, seeks to push companies and institutions to use this type of marketing and business. The results of this study indicate that in the competitive era and critical conditions (Cronulla), today this type of marketing and trade as a strategic factor and competitive advantage, has helped most of the companies in sales growth and increasing the share of a domestic and foreign market, and if these companies use this type of technology with the principles outlined in the article, it will be seen a high saving of time and cost as well as improving the status of companies in coronavirus conditions (Boles et al., 2017).

## 2. The Situation of Foreign Technology Businesses During the Coronavirus

In contrast to the sharp decline in the value of stocks in the petrochemical and industrial sectors, technology companies have experienced a narrower decline in market value at the beginning and with the initial shock of the Corona crisis, and some companies such as Amazon and Netflix have been on the growth path. The corona virus crisis with the closure of factories in China has caused a devastating impact on the production and supply chain of many sectors in different countries around the world. Given China's key role in global supply chains, it can be predicted

that the decline in production in China will soon harm businesses around the world (Brynjolfsson, 2020).

In this regard, the French government has called on companies to reconsider their over-dependence on China regarding raw materials and parts. Supply chain disruptions have also led to problems with smartphone sales. Huawei, as the largest smartphone manufacturer in China and one of the largest in the world, has been directly affected by the problems caused by the spread of the coronavirus (Bailey & Breslin, 2020). The survey of online traffic in different areas also shows that the amount of buying and selling in many industries such as sports equipment, home appliances, luxury goods, and tourism has decreased and as a result, the reduction of online banking and insurance transactions has also caused. In contrast, the volume of an online supermarket and retail purchases has increased along with the amount of supply and demand for media and communication services in many regions of the world (Stiglitz, 2014). Amazon, for example, has announced that it is hiring 100,000 recruits in the U.S. alone. The company's employee wages are also set to increase in Europe and the rest of the world. In this regard, online food sales and daily food delivery programs have been growing in China. According to Carrefour Retail, vegetable delivery has grown by 600% compared to last year. The recovery of profits from the COVID-19 pandemic must be focused on reconstruction activities. It's also a must when contemplating modern supply chains, SKUs that are more reliable and cost-effective, and production methods (Liang & Cheah 2020).

Long-distance overseas manufacturers are supported by supply chine, who are hampered in their home countries by different constraints or are reliant on a difficult international shipping sector (Verma & Gustafsson 2020). The COVID- the series, as well as the timing and size of disturbance propagation (i.e., the ripple effect). As a result, firms are increasingly modifying their supply chains through considerations such as localization, complexity elimination, and dual procurement. Use of artificial intelligence (AI) and big data for more efficient supply chain platforms; inclusion of tax optimization into the existing financial analysis; use of the cost-to-serve predictor as the foundational efficiency metric; modeling scenarios are all necessary new methods for the effective reconstruction of operations before and after the COVID-19 pandemic (Shakirov, 2016; Dore et al., 2020).

## 4. Rethinking the Organization

Lessons gained from businesses operating in a COVID-19-affected economy from March to August 2020, show disparities dictated first and foremost by their workers' ability to operate remotely or not. Businesses, where remote work was not available on a broad scale, reported considerably higher job losses and anticipated sales reductions (Bazgosha et al., 2012). During the first three months of the pandemic, half of the American workforce turned to remote working, while 41% of Canadian workers became ideal for remote working. As a result of this evolution, new work and operational techniques have emerged, some of which have proven to be successful and therefore can be maintained in the future.

Managers in remote teams, on the other hand, have discovered a host of difficulties in coordinating workers who work from home, including coordination problems, the fear of 24/7 reporting and burnout, a lack of personal contact, isolation, and poor health behaviors (. Zhang et al., 2020b; Hakkak et al., 2014; Chen et al., 2020; Asadollahi et al., 2011). Job- and relation-oriented leadership action, according to access to the portal is the key-element to favor productive work environment at a distance, so organizational cultures already benefiting from this style of a boss had an advantage during the COVID-19 pandemic. Their research, which was focused on data gathered from employees of financial institutions in Germany in April-

May 2020, showed that in tumultuous times like the current one, both facilitating and managing leadership behavior is critical.

Task-oriented action and giving subordinates control and assistance are examples of unique management approaches. The COVID-19 pandemic showed, more than ever, the importance of preparing businesses to transition from strict preparation to simultaneous improvisation at all levels of the enterprise. As a result, it is not enough to have a good organizational culture to withstand a pandemic; it must also be resilient, which is consistent with previous studies on the importance of having both aligned and adaptive organizational cultures for long-term resilience (Sadeghi et al., 2013; Jahanshahi et al., 2020).

Hiring and promoting resilient and adaptable people who are capable of being calm in difficult and turbulent times; continuous communication by examples of how the organization is adhering to its cultural values by new practices; and leveraging the organizational culture through adopting. The last point is in line with results from a survey of executives from 39 Indian companies, local businesses, and MNC subsidiaries (Fong et al., 2020) which provided evidence on an unprecedented change in corporate cultures towards a shared goal (either the customer or the employee), making it easier for managers to communicate and take swift decisions and individuals and third parties from the corporate community were impacted the most as the situation was at its worst (vendors, partners, etc.).

Such an approach could, in an ideal world, be the direct result of a form of social value formation triggered by the pandemic's context by Ratten, which is evident at the legislative, organizational, and individual levels.

## 4. Accelerating Digitalization

The definition of resilience is not new, but its application in the context of the COVID-19 pandemic has some unique characteristics. The rapid acceleration of digitalization is one of them, even for companies that were not tech-savvy before the pandemic. Many companies' key response to the pandemic was to quickly implement digital solutions, which paid off because they were able to quickly transition from physical to remote working while being as effective as possible under the circumstances. As a result, most businesses are accelerating their digital transformation, according to Statista's survey of international digital decision-makers (Gallacher & Hossain, 2020). As a result, considering the challenges posed by the COVID-19 pandemic, companies are interested in improving employee digital experiences, as reported by 52 percent of Chief Information Officers (CIOs) worldwide surveyed by Statista, which is expected to be reflected in an increase in investments in digital products and solutions of about 10.4 percent in 2020.

Digitalization, described as "the development of new business models and processes that take advantage of digital opportunities", is more than just using digital tools. Based on their prior experience and orientation toward innovation and technology, some businesses were only forced to implement digital solutions during the pandemic. Around the same time, other businesses that had already succeeded in their digitalization showed that they were prepared to deal with the COVID-19s new way of doing business (Kantar, 2020). The effect of the COVID-19 pandemic on digitalization adoption is expected to result in a revival of old e-commerce models, as well as a major increase in digital collaboration platforms, remote job arrangements, digitization of customer care, the transition to e-commerce, greater use of self-service, digital networks allowing contactless distribution options, use of online and on-demand platforms, and outsourced IT are some of the digital trends posed by the COVID-19 pandemic that are considered future realities (MKOR, 2020).

## 5. Coronavirus Develops AI-based Services

Studies by the ICT Research Institute also show that the development of services based on new technologies such as AI chat robots, robots, anti-fever glasses, and disinfectant drones, and care and remote medicine are also the consequences of the Coronavirus crisis in technology businesses (Moezzi et al., 2012; Hakkak et al., 2013; Jahanshahi et al., 2019; Khaksar et al., 2010a). Relying on the development of these services and businesses, China's ICT sector, which declined by 10 percent at the beginning of 2020, is projected to grow by 5.5 percent at the end of 2020 (PwC, 2020a). Alibaba Trading, for example, has entered one of the largest e-commerce platforms in China relying on its communication and information infrastructure in the field of health care. The company has launched drug delivery services for people who need medication to treat chronic diseases. Alibaba Trading, for example, has entered one of the largest e-commerce platforms in China relying on its communication and information infrastructure in the field of health care. The company has launched drug delivery services for people who need medication to treat chronic diseases. China's largest search engine, Bedu has also already implemented an online consulting platform for any medical questions and for free (KMPG, 2020). The company has also produced an artificial intelligence model to identify people who do not have protective masks. Three reasons why coronavirus is not disrupting China's economy is as following:

It is estimated that the negative economic impacts of the new coronavirus are limited. The effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. China's stock market has fallen in recent days after months of rising, with global markets looking on. There are already concerns about the impact of the disease's pervasiveness on China's economy and the growth of the world economy. Are these concerns true? The coronavirus is expected to infect more people in the second and third weeks of February, causing more deaths, it is estimated that the negative economic impacts of the new coronavirus are limited. The effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. China's stock market has fallen in recent days after months of rising, with global markets looking on. There are already concerns about the impact of the disease's pervasiveness on China's economy and the growth of the world economy. Are these concerns true? The coronavirus is expected to infect more people in the second and third weeks of February, causing more deaths, but Chinese authorities and the World Health Organization are expected to bring the virus under control by early April. According to this scenario, it is estimated that the negative economic impacts of the virus are limited. Its effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. The impact in the first quarter of 2020 will be huge, perhaps reducing economic growth by one percent on an annual while this decline will be offset by the continuation of the year, and the impact on the world's GDP growth will be even lower. This forecast is reminiscent of the experience of the SARS crisis in 2003. A big decline in China's GDP growth was offset in the second quarter of that year in the following two seasons. While the annual growth rate in 2003 was around some fear that the timing of the new virus will keep many people away from shops, restaurants, and travel spaces at the start of a week-long Chinese New Year celebration and school closures, worsening economic conditions. Figure 1, shows COVID-19 disease phases around the world taken on 2020. Also, Figure 2 indicates the impact of COVID-19 on Hubei, China released on 2020 (PwC, 2020b).

The crisis created by the Coronavirus is a story with an uncertain ending. It's saddening people's lives, and companies are trying to protect their employees, address business challenges and risks, and also, reducing the prevalence of this disease in any way they can is a serious task. You can also get the latest information about the Coronavirus from the Centers for Disease

Control and Prevention; such as the European Union, the US Centers for Disease Control and Prevention, the World Health Organization, and the Outbreak Information provided by Johns Hopkins University for updates.

Figure 1 – Critical indicators of the impact of Covid-19 (Feb. 28, 2020). Phases around the world



Figure 2 – Critical indicators of the impact of Covid-19 (Feb. 28, 2020). Impact on Hubei

## 6. Three Important Factors Limit the Effect of the Virus

First, unlike the SARS outbreak, China is currently in the age of internet commerce, which means many customers make their purchases online. The decline in in-person purchases to avoid the virus is likely to be offset by an increase in online purchases. Many of the travels that have been canceled today will surely be replaced in the future, as their budgets have been set aside. Many factories had planned their production halt due to the Chinese New Year holidays, so the timing of the outbreak would prevent their unwanted closures. Many government centers and schools are also on vacation, which has nothing to do with the outbreak.

Second, all reports suggest that the new coronavirus is not as deadly as SARS, even if it is transmitted faster. Chinese authorities are equally faster at controlling the virus than at the time of the SARS outbreak. Authorities have increased the chances of faster containment of the disease by taking drastic measures to quarantine real and potential patients. The decline in economic production in these three months will also be offset by increased activity in the continuation of the year.

Third, we do not know if China's trade negotiators knew about the deterioration of the new virus when the first phase of the trade deal with the United States was signed on January 15, but in any case, the timing of the deal was in China's favor. As imports of face masks and medical supplies from the U.S. and other regions increase, China can simultaneously deal with the crisis and keep its promise to import more.

## 7. The Best Sales and Strategy in Times of Crisis and Coronavirus

Let's explore a business together. Suppose you own a supermarket and your customers are minimized due to the spread of the coronavirus. In such a situation, you definitely do not have the necessary infrastructure to sell food online, or you may not even have the necessary knowledge, but you can leave a free courier for your neighborhood customers so that they can register their order without leaving home. Receive at home. Keep in mind that this can initially increase your costs and those of your business, but the payback period is very short and your costs may be reimbursed within a week.

### 7.1     *What Strategies Should We Use in Times of Virus Crisis?*

Just as we have a crisis in life, we are not immune to a crisis in business. As a business owner, if you have the ability to manage the crisis caused by the COVID-19 virus, you can easily make your business a success. The existence of business is basically tied to natural and unnatural crises. It is safe to say that businesses experience a variety of crises throughout their life cycle; Crises such as running out of liquidity, loss of technical team, cancellation of contracts, non-fulfillment of investor promises, and more.

Now, despite the corona crisis in business and the involvement of the general, business managers must pay attention to the fact that they can provide their services to better services for all people in the community (Nawaser, 2015). We all know that commuting these days can increase the number of carriers of the disease in addition to high stress, so the first solution you need to implement in your business is to provide your services online or by phone. In a way that the need for the presence of customers and audiences is kept to a minimum (McGinn, 2020).

### 7.2. *Avoid Making Thoughtless Decisions*

One of the problems that many start-ups often experience is the excitement of making decisions and the haste in making thoughtless decisions. As someone who has a direct impact

on your business, you should be aware that immediate decisions can ruin your business in a short period of time (Gharleghi et al., 2018; Khaksar et al., 2010b; Hakkak et al., 2016). But with the knowledge and understanding of the existing conditions of this disease, it can save you from fast and thoughtless thoughts and consequently immediate wrong decisions, and instead replace it with thinking, understanding, and commitment to solving the problem. Commitment comes first in life, and leaders who make calm decisions in crisis situations usually have strong crisis management and can be better managers for businesses because they are able to think before they get excited. Make a deeper understanding of the crisis ahead and make a wiser and more principled decision (Prasad et al., 2020; Jahanshahi et al., 2011; Hashemzadeh et al., 2011).

Now the move could be to equip your business, or train your troops, or change your product line, or maybe take the opportunity to advertise and work on your business branding. This move can make your business faster. Engrave as a leading and successful business in the minds of the audience. In fact, I mean this faster move, in a way, it can be a better and more principled decision in how to provide services, or it can be related to the right strategy in relation to other customers. This will help you to overcome the corona crisis in business safely.

## 8. Marketing Response

The global impact of the COVID-19 pandemics has been profound. The need for protection, as well as the lockdown time enforced in many counties, compelled them to shop online (Shen et al., 2020). During the lockdown, it was teenagers one of the first to aspire toward online shopping. In the short term, this move will result in increased online competition, more nuanced online marketing strategies, and more differentiation between online sellers. The online experience may become even more important in terms of establishing choice and loyalty. There is no time for extensive consumer surveys and the preparation, treatment, and connection of new offers (both online but also touch-free where offline relationships are operating). It's probably more necessary than ever to build relationships with them when attending to their special needs and demonstrating empathy (Papanikolaou et al., 2020; Khaksar et al., 2011).

The pandemic has given consumers the ability and time to reflect on the basic sense of consumption and the effect of their consumption not only on themselves but also on others, culture, as well as the environment, not least for the short term. Before the pandemic, customers in the developed world took it for granted that their basic needs, such as food and shelter, could be met quickly thanks to the wide range of goods and services available. During the COVID-19 pandemic, consumers' attitudes shifted toward purchasing more essentials, indicating that they were more cautious. Customers tend to cut needless costs in difficult times like pandemics, which is understandable given declining incomes and increased uncertainties. Marketers should also keep in mind that during the pandemic, all in-home media consumption increased. The activity with the biggest increase during the lockdown at least was culture, news, and hobbies. New brands were trusted by 50% of customers. Online shopping, conscientious consumption, fitness literacy, and local shopping are only a few of the market trends that have intensified. Many of the newly acquired purchase habits are likely to persist after the pandemic: contactless payment, in-app purchasing, home delivery, social media shopping, chatbot, virtual consultation, etc. The pandemic COVID-19 gives companies a tremendous opportunity to change towards more genuine and genuine Corporate Social Responsibility (CSR) and help solve the global challenges of society and the environment.

## 9. Future Discussion

In the first seven months of the 2020 pandemic, it was provided literature evidence regarding the effect of the COVID-19 pandemic on the industry. There are limitations due to the semi-structured approach to reporting, but the factors found to rely on a framework of the most critical elements that determine interpretation responses after the pandemic crisis.

Agile resilience, companies have to work in five main areas today: sales recovery, industry redefinition, organizational rethink, digitalization acceleration, and marketing strategies adaptation. So much emphasis should be placed on evaluating the effect on COVID-19 in future comments about development, performance, teamwork (even from a distance), and cooperation. Current research has suggested also that social contract as a consequence of the collective meaning decided by the pandemic has become an aim for organizations and governments. But it is anticipated that the revision of self-reporting and corporate goals would re-emphasize the norm at medium and long-term in challenging and prolonged times of economic slowdown and intensified competition. Figure 3 represents the COVID-19 impact on Chinese consumer's confidence.

Figure 3 − COVID-19 impact on Chinese consumer's confidence
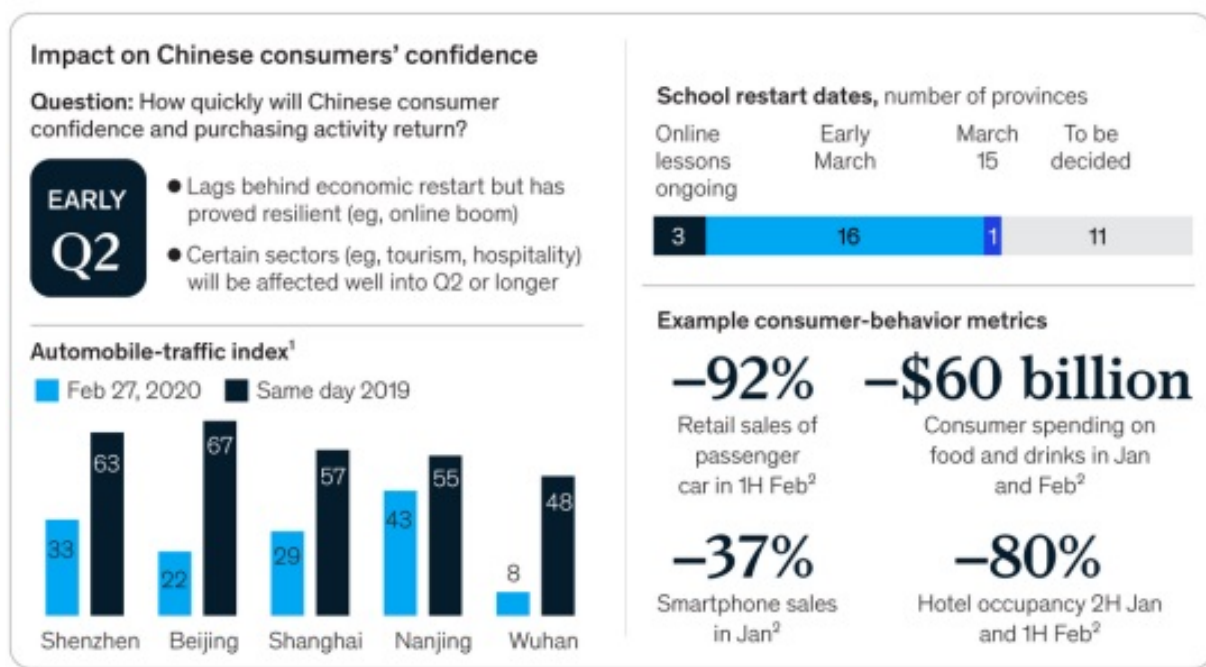


## 10. Conclusion

Despite the new restrictions imposed in many countries around the world affected by the second wave of coronavirus outbreaks, the rate of decline in the volume of the world economy and next year's economic growth rate is lower than the figures announced in its September report. Its forecasts show that one-third of China's world economic growth will originate next year, but economic growth in the European Union and the United States will be lower than their contribution to the global economy.

The Organization for Economic Co-ordination and Development noted in its report that given the difficulties of vaccinating the entire world population, the ambiguity about how long

the vaccine will take effect, and the possibility of continuing some restrictions on controlling the spread of the virus; "the future of the world economy is still very vague".

Despite the injection of significant economic incentives and hopes of reviving the world economy next year, one must accept the fact that the Coronavirus crisis has damaged the economic fabric of many countries. Future discussions should focus more on measuring the impact of COVID-19 on innovation, efficiency, teamwork (even if at distance), and on collaboration. Current researches suggest an orientation towards common good as a purpose of brands and organizations as a result of the collective sense determined by the pandemic, but it is to be surveyed on the medium and long term in difficult and prolonged times marked by economic slowdowns and increased competition, refocus on the self and organizational objectives could be expected to re become the norm.

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# CORPORATE SOCIAL RESPONSIBILITY PRACTICES IN THE RETAIL SECTOR: A MULTIPLE CASE STUDY ANALYSIS OF US RETAILERS

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## Abstract

*Over the last few years, Corporate Social Responsibility (CSR) has become a central theme in corporate management and is a relevant element of competitiveness for businesses. However, it is difficult to find a sustainable business model that fits perfectly to all companies, therefore, the aim of this study is to analyze the social responsibility balances of some of the major American companies in the retail sector through a multiple case study analysis, to verify similarities and differences in their approach to defining a socially responsible strategy. The methodology used is a multiple case study analysis that compares the Social Reports of 5 American companies selected as a sample as they are leaders in the Retail sector, considering the Deloitte rankings. The commitment on the social and environmental front of companies considered is aimed at producing long-term collective benefits and is not reduced to formal and facade interventions adopted in the short term mainly for opportunistic purposes. Sometimes companies consider sustainability as a goal to be achieved, but from the results of the study, analyzing the different time period 2012-2018, it can be seen that it is not an achievable goal, but a prolonged path, during which the company and its stakeholders try to improve each other continuously.*

## 1. Introduction

Both from literature and from field research, it appears that, over the last few years, Corporate Social Responsibility (CSR) has become a central theme in corporate management; it is defined as the commitment of an organization" to behave in an ethically correct way and to contribute to economic development by improving the quality of life of workers and their families, of the local community and of society in a broader sense". The main idea is defined under the concept of "triple bottom line" (Elkington, 1994; Elkington, 2013), that is the pursuit of three types of results: economic, social and environmental decisions (Arrigo, 2005; KsiężaK and FischBach, 2017).

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CSR is therefore a management orientation that goes beyond the respect of regulatory compliance and defines a broader objective function than the simple profit. With CSR, in fact, it is not only property and management that define and compete for the value created by the company, but all the stakeholders that are part of it, that is, all those subjects directly and indirectly involved in the organization's activities. CSR focuses on the composition of the various interests of the multiple stakeholders at the center of the company's objective-function, where the environmental, humanitarian and social dimensions are freed from a historical role of subjection to the objective of profit and, contribute to defining methods and constraints for achieving the most strictly economic results (Popoli, 2011; Kopel, 2021).

According to the literature, a variable that leads companies to consider social issues is competition, which drives companies to differentiate and qualify their offer (Souza-Monteiro and Hooker, 2017). The large multinationals, including the large food chains, were among the first to adopt CSR policies (Gheribi et al., 2017). Developing such a strategy is in fact able to improve the image and reputation of the company by promoting customer loyalty, effectively manage human resources, efficiently use environmental and natural resources, and better manage business risk and relations with financial institutions (Księżak, 2016; Chatzoglou et al., 2017).

In recent years there has been a rapid rise in the global fair trade market but, with reference to the context of large retailers, this is a relatively recent phenomenon. Until the 1980s, eco-friendly, organic products were sold in shops, specific shops or directly by farmers. Starting from the 1990s, these products entered large supermarkets, which were joined by private label products at more competitive prices. It should be stressed that it cannot be spoken of "responsible large-scale distribution" if the entire upstream chain is not like this.

The concept of supply chain sustainability develops alongside that of corporate social responsibility, receiving considerable attention in the industrial world; in fact, an increasing number of companies are implementing annual social reports, sustainability strategies and codes of conduct, deriving from national legislative impositions, international conventions, standards or principles such as: Social Accountability 8000, ISO 14001, Global Reporting Initiative (Jadhav et al., 2019; Andreson et al., 2020; Murmura and Bravi, 2020).

For the application of the sustainable supply chain, a strong integration between the internal and external environment of the company is required, putting into practice mechanisms to increase knowledge. As regards the internal dimension, it includes the training of employees and the sharing of experiences between groups of workers; in the case of the external one, on the other hand, the training of key suppliers and the development of promotion programs through positive incentives (for example long-term contracts and / or large volumes of orders) are considered for all those who implement codes of conduct and periodic review of their performance (Carter and Jennings, 2002; Zaid et al., 2018). As stated by Maloni and Brown (2006), it is not possible to find a sustainable business model that fits perfectly to all companies, but each specific case must be studied. For this reason, the aim of this study is to analyze the social responsibility balances of some of the major American companies in the retail sector through a multiple case study analysis, to verify similarities and differences in their approach to defining a socially responsible strategy, considering the time period 2012-2018 and underling the main improvements of their socially responsible strategy during this period.

## 2.     Methodology

### 2.1 Sample and data analysis

The analysis carried out in this study begins with the consultation and extrapolation of data from the "Global Powers of Retailing" world ranking. This ranking is promoted every year by

Deloitte, a consulting and auditing services company, the first in the world in terms of revenues and number of professionals, which identifies the 250 largest retailers in the globe based on data published annually by the companies.

The methodology used is a multiple case study analysis that compares the Social Reports of 5 American companies selected as a sample as they are leaders in the Retail sector, considering the Deloitte rankings. According to Creswell (2013, p. 97), a multiple case study method explores multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (Creswell, 2013). In this case the time period considered is 2012-2018. The methodology of the multiple case-study chosen is that of a descriptive type, as the research aims to delineate the general and particular features of a given phenomenon (Bertazzaghi et al., 2010).

Companies for this study were originally selected according to the following criteria:
- position: all companies must be located in America;
- industry: all companies must belong to the retail sector;
- relevance: all companies must be present in the Deloitte rankings as leaders in the sector.

The choice to focus on the retail sector is motivated by the fact that it is characterized by the presence of companies that have to deal with a large number of stakeholders and that play a dual role: they constantly communicate with consumers, for whom the information and image of the company are decisive in the choice of products and they act as intermediaries in the supply chain of consumers paying more attention to issues related to corporate social responsibility.

The purpose of this work is to analyze and compare the corporate social responsibility (CSR) policies implemented by American leading companies in the retail sector, in order to understand differences and the possible factors influencing these differences.

For the purposes of the multiple case study analysis, in addition to the documents provided by Deloitte on its website, the public domain data that can be consulted in the relevant CSR reports of the companies selected as a sample were taken into consideration, studied and analyzed. More specifically, with regard to Deloitte's "Global Powers of Retailing 2013 - Retail Beyond", the data refer to the 2011 fiscal year with financial years ending in June 2012; while, for the data taken from the Global Powers of Retailing 2019 report, used for the analysis, refer to the 2017 fiscal year with the end of the financial year in June 2018. The main sources of data for financial and other information used by Deloitte come from annual reports; SEC filing, which is financial statements or other formal documents filed with the United States Security and Exchange Commission (SEC); press releases; information sheets of companies or on company websites. If information issued by companies is not available, other publicly available sources are used, including estimates from trade journals, industry analyst reports, and press interviews.

It should also be noted that the financial information used for each company in a given year is accurate from the date of publication of the financial report. Although a company may have restated the results of the previous year to reflect a change in its activities or as a result of an accounting change, such restatements are not reported in these data. The Deloitte investigation is therefore not an accounting report. Due to these factors, it reflects the dynamics of the market and the impact on the retail trade industry for a given period of time.

The selected sample is shown in Table 1 and it is composed by:

- *Wal-mart Stores, Inc.*, is a US multinational, owner of the Walmart retail chain of the same name, founded by Sam Walton in 1962, in Rogers, Arkansas. It is the largest

chain in the world in the large-scale retail channel. It also owns and operates the retail warehouses of Sam's Club. It has 2.2 million employees and according to Deloitte 2019 data has a turnover of 500.343 billion dollars, currently operates in 29 countries and it has as the largest operating format: Hypermarket / Supercenter / Superstore. Headquarters: Bentonville, Arkansas (US).

- *Costco Wholesale Corporation*, is a large American chain of wholesale hypermarkets founded by James Sinegal and Jeffrey Brotman in 1983 in Kirkland, Washington. It has 225,000 employees and according to Deloitte 2019 data has a turnover of 129.025 billion dollars, currently operates in 12 countries and it has as the largest operating format: Cash & Carry / Warehouse Club. Headquarters: Issaquah, Washington (US).

- *The Kroger Co.*, is a US retail chain founded by Bernard Kroger in 1883 in Cincinnati, Ohio. It has over 450,000 employees and according to Deloitte 2019 data has a turnover of 118.982 billion dollars, currently operates in one country and it has as the largest operating format: Supermarket. Headquarters: Cincinnati, Ohio (US).

- *The Home Depot, Inc.*, is a US retailer of products for home improvement, construction and maintenance. Founded in Atlanta in 1978 by Arthur Blank, Bernard Marcus, Pat Farrah and Ron Brill. It has 400,000 employees and according to Deloitte 2019 data has a turnover of: 100.904 billion dollars, currently operates in 4 countries and as a major operating format: Home Improvement (renovation, improvement and maintenance of houses or apartments). Headquarters: Vinings, Georgia (US).

- *Walgreens Boots Alliance, Inc.,* Named Walgreen Co. until 2013, today it is an American multinational world leader in the distribution of health and wellness products. The new company was founded on December 31, 2014 in Chicago following the acquisition by Walgreens of 55% of the Swiss company Alliance Boots in which it had already entered in 2012, acquiring 45% of the capital. It has 415,000 employees and according to Deloitte 2019 data it has a turnover of 99.115 billion dollars, currently operates in 10 countries and it has as the largest operating format: Drug Store / Pharmacy. Headquarters: Deerfield, Illinois (US).

Table 1 − Sample profile of companies that participated in the analysis (Source: elaboration on Deloitte 2013-2019 data).

| Company | Country of origin | Number of employees | FY 2011 Retail Revenue (US$M) | FY 2017 Retail Revenue (US$M) | Countries of operation (Deloitte 2013) | Countries of operation (Deloitte 2019) | Dominant operational format |
|---------|-------------------|---------------------|-------------------------------|-------------------------------|----------------------------------------|----------------------------------------|------------------------------|
| Wal-Mart Stores, Inc. | US | 2,200,000 | 446,950 | 500,343 | 28 | 29 | Hypermarket /Supercenter /Superstore |
| Costco Wholesale Corporation | US | 225,000 | 88,915 | 129,025 | 9 | 12 | Cash & Carry/ Warehouse Club |
| The Kroger Co. | US | 453,223 | 90,374 | 118,982 | 1 | 1 | Supermarket |
| The Home Depot, Inc. | US | 400,000 | 70,395 | 100,904 | 5 | 4 | Home improvement |
| Walgreens Boots Alliance, Inc. | US | 415,000 | 72,184 | 99,115 | 2 | 10 | Drug store / Pharmacy |

## 3. Analysis of the 2012-2018 CSR report

### 3.2 Company - Internal organization

As for the data reported in the 2012 CSR reports, each of the selected retailers has a set of principles and methods that govern their employees and establish duties, rights and working conditions. Almost all retailers cite compliance with the Universal Declaration of Human Rights which recognizes the inalienable and inviolable rights of all people. Walmart does not refer, in their 2012 social responsibility report, to the protection of workers' rights, but report it on the principles that guide the choice of suppliers.

Overall, it can be said that the common goal of all companies is to create a serene, friendly, stimulating work environment in which employees can grow professionally, develop skills and work peacefully and aspire to leadership positions. The retailers highlight this aspect only in the part relating to the ethical and social characteristics that their suppliers must have, so they implicitly declare themselves opposed to the exploitation of workers and the imposition of unfair working hours. The active participation of employees and their involvement is another very important topic. All companies, with the exception of Costco, and Kroger have in their 2012 CSR report at least one reference to the centrality of their employees and five out of twelve companies periodically submit them to surveys or questionnaires to assess their degree of satisfaction, have opinions and suggestions on the policies to be adopted and, in some cases, involve them in strategic choices. Companies want to create a work environment based on dialogue, participation and sharing. Interaction is also a goal that many companies want to achieve but still have a long way to go. The development of values of respect and protection towards the worker will certainly help to achieve this goal.

Occupational health and safety are a priority for all retailers. In particular, Walmart's safety programs focus on preventing employee and customer injury by having trained safety professionals in every store. Additionally, Walmart creates standards to protect workers who use high-risk chemicals or machinery. These proactive measures go beyond local laws and industry standards and improve employee conditions. Only Costco does not refer to this aspect in its report. Therefore, it is possible to note that the problem of workplace safety and accident prevention is a very relevant topic, close to the heart of companies that want to avoid unpleasant accidents and damage that could affect the corporate image.

Training is a requirement that cannot be missing from any type of company. In fact, all retailers are committed to developing their employees' skills, offering them good career opportunities. In particular, Walmart collaborates with universities and training institutes, developing mentoring programs such as "Mentor Me", designed to help, create and share diverse knowledge, experiences and perspectives.

As for the data reported in the 2018 CSR reports, for all the retailers analyzed, setting the economic well-being of their employees as an objective is a form of investment for an organization, because offering higher wages than the minimum standards guaranteed by the contract allows it to build strong links with the community, build employee loyalty and strengthen the organization. Human resources are an essential asset. Their development represents a fundamental factor for the consolidation of the growth and continuity of retailers. Communication with head office and network employees becomes an increasingly important tool for collaboration and innovation, so much that various reports talk about employee loyalty. In 2018, Costco employees had, on average, nearly nine years of service at the company. Over 60% of US employees have five or more, and over a third have more than ten. Worldwide, they have more than 13,000 employees with more than 25 years of service with Costco.

With 225,000 employees, Costco Wholesale Corporation believes the key to the company's continued success and growth is employee attraction and retention. The overall goal of all

retailers is to promote an attractive, fair and safe work environment and encourage an atmosphere of openness and support with an open-door policy, which allows any employee to discuss a problem with any level of management. Promote diversity, individuality and personal responsibility within the workforce. What changes is the systematic integration of sustainability into personal development programs through seminars and training courses. Also in 2018, most of the retailers analyzed listened to the opinions of their employees through a survey.

For Walmart, employees are also at the heart of the company's business and it engages with them in a variety of ways, including: individual interaction, group meetings, corporate intranet, Facebook Workplace and other social media, in addition to traditional digital communications like e-mail. Walmart uses the feedback it receives from its employees to understand the issues that are of primary importance and tries to respond as effectively as possible. Employees involved are happier and perform at their best.

As a result, they provide better customer service by creating a clean, fast and friendly shopping experience. This is why the world's leading retailer invests $ 2.7 billion in its staff over two years - in education and training, salaries and programming - ensuring that even more collaborators have clear paths to grow and advance. A diverse leadership team, as well as a diverse board, is a priority for Walmart, which argues that the best place to find strong leaders for the management team is within the company itself.

The health and well-being of its employees, but not only, in 2018, also of its customers, leads to very important reflections for most of the analyzed sample. With this it is appropriate to present the most significant actions implemented by the various retailers.

Among the most important initiatives in the US, Kroger focuses on providing training and equipment suitable for safety, safe working conditions and access to resources to maintain and improve the well-being of members. The company relies on several policies to ensure compliance with relevant OSHA (Professional Saftey and Health Administration) requirements. Through clear expectations, routine monitoring, communications and regular engagements, Kroger manages to reduce the number of injuries and accidents that occur in the workplace. Walgreens Boots Alliance is committed to creating and maintaining a safe environment for employees, customers and patients. While it did not map a GRI standard on employee safety in the 2018 report, it is examining the new 403-4 standard "Worker participation and consultation and communication on occupational health and safety" for the 2019 report. The company conducts its global business planning and day-to-day operations with the utmost concern for health and safety management, including through its own retail stores and distribution centers. It constantly strives to expand its robust approach to health and safety and to promote continuous improvements even when they exceed local legislative requirements, including through coordination with the Walgreens Boots Alliance Health, Safety and Environment Committee. Walgreens encourages open dialogue and constructive feedback from all stakeholders to help ensure best practices in health and safety management are implemented in all businesses around the world. It also requires that all divisions, entities, cross functions and business functions have complete formal governance processes in place regarding health and safety in the business operations for which they are responsible. Through training courses and a focus on safety culture, Walgreens achieves reductions in employee and customer incident reductions in retail stores over a four-year period, ending August 31, 2018. In fiscal 2018, Walgreens also records a significant improvement in its minimization of causes and management of risks relating to accidents at work. Walmart associates receive training on a variety of health and safety-related processes.

One example is the "Walmart Compliance Champions," with which the company, through associates chosen by management, promotes compliance and ethics initiatives, including safety.

Additionally, an active continuous improvement team monitors facility compliance with health and safety regulations, as well as other compliance initiatives.

A fundamental tool for developing the skills and abilities of employees is training, which is positioned at the center of the human resources enhancement policies of all retailers. As it has been seen, much of the training is now also provided on the subject of health and safety in the workplace. In addition to the sensitive issue of security, training is also used to achieve: better customer relationships, product knowledge, company operation, hiring positions for new employees and capacity building for digital tools. Different from the past are the modules developed to train employees on CSR, both on social and environmental aspects. Making the staff more and more competent and professional in the management of commercial dialogue is a commitment that all companies undertake towards partners and customers.

Kroger in 2018, updates the curriculum of "Leadership Essential", a training program to better prepare trainees for new positions. This training offers skills development to develop technical knowledge and safety expertise to provide the best customer experience. It offers a comprehensive leadership training and development curriculum, through Kroger University, with two different levels: role-based skills training from new hiring associate to store manager and leadership development from department head to executive.

The Home Depot employs $ 50 million to train 20,000 merchants by 2028 to help address the shortage of skilled labor. As part of this commitment, in 2017, the THD Foundation collaborated with the Home Builders Institute (HBI) to launch a twelve-week commercial training program for military and veteran members through the support of: e-learning, experiences led by instructors, online resources, executive development and mobile learning.

The common goal of all retailers is to build a learning-rich environment in which employees and leaders are prepared to succeed, motivated to serve customers well and offer opportunities for growth. Development and learning programs expand skills and capabilities so employees can master their roles, which ultimately leads to great customer experiences.

Understanding, respecting and valuing diversity, styles, experiences, identities, ideas and opinions are the basis on which every company, regardless of the sector of origin, must start to offer equal opportunities to its valuable builders, every day. "A truly inclusive workplace culture is one in which every employee feels able to bring their authentic self to work every day." This is where the world leader in the Retail sector, Walmart, starts from to respect the theme of inclusion and equal opportunities.

Unanimously, the analyzed retailers consider diversity and inclusion as a critical success factor as having different talents within their organization is the best way to understand the diversity and expectations of their customers.

At The Home Depot, people from different backgrounds bring different perspectives and ideas to the company and this fosters innovation. The company actively integrates diversity and inclusion into every aspect of the business. The collaborators and suppliers, the selection of products and the services it offers all aim to create a workplace and a company that reflects the community it serves. The Home Depot proudly collaborates with the National Council for Female Entrepreneurship to promote gender equality among suppliers. Finally, the world leader in the distribution of health and wellness products, Walgreens Boots Alliance, argues that diversity and inclusion have a real impact on their brand and it is imperative that marketing and products reflect the diversity of consumers and their needs. Starting in September 2018, Walgreens Boots Alliance implements a diversity and inclusion performance target, which is measured by a number of key factors, including an increase in the representation of women in leadership positions, year-on-year, in all countries in which the company operates and a greater representation of people of color in leadership, year after year, in the United States.

Appreciating the diverse backgrounds, experiences, knowledge and skills of all employees and guaranteeing equal employment opportunities and equal treatment to all individuals is part of the entire sample analyzed today. Decisions within companies are made regardless of gender, race, language, religion, ethnicity, sexual orientation, age, disability. The common goal is to achieve gender equality and offer a wide range of job opportunities for workers of all ages and aspirations, from teenagers looking for their first job to experienced career professionals and seniors who wish to stay active and connected in their community.

Today, making diversity a business asset is part of the corporate strategies of the world's top retailers.

### 3.2 Company - Family, social and stakeholder context

The companies are also active in the social context towards the families of their employees through health insurance, subsidized pension schemes, family assistance programs, insurance services and scholarships.

General health insurance and benefits include preventive health checks for workers and their families, free counseling services for heart disease, diabetes, weight problems and nicotine replacement therapy, free preventive care and HIV testing. Walmart is moving in this direction, while no health information is reported by Costco.

The general objective of companies is to guarantee their employees a decent standard of living through satisfactory salaries and benefits, in line with national standards.

Finally, in the reports of almost all the retailers analyzed, the commitment of the companies to create value for the shareholders is mentioned without going into detail. However, most retailers want to emphasize their member discount policy.

Companies have long been aware of the need to ensure a better life and good health for their employees. This is why, in 2018, almost all retailers implement health coverage or additional benefits in all countries in which they operate.

In view of the recurring disengagement of several states regarding the assumption of certain health costs, various entities are organizing themselves to offer quality services (health / wellness) at competitive prices, thus preserving the purchasing power and health of employees.

Costco applies its philosophy of pricing and high standards to an industry where price spreads are the norm, creating an alternative solution for employers, transferring all savings to the company sponsoring the benefit plan. This alternative program is part of Costco's Healt Solution offering and is one of the few in the industry to offer this benefit to the end consumer. For each dispensed prescription, the customer pays only the actual cost of the prescription and Costco's only source of revenue is a fixed monthly administration fee. This 100% pass-through model matches Costco's pharmacy management efforts with the employer's need for transparency and savings and eliminates the spread and gameplay found elsewhere in the industry. Companies that participate in the statute of limitations indemnity program typically cut costs by 10 to 25%. Even Kroger, which ranks immediately after Costco in the rankings, is very keen on the physical, economic and financial well-being of its employees. It offers a number of important benefits to help them save money, continue their education, take care of themselves and their families. All this, Kroger is ready to help its collaborators with the Helping Hands fund which, in 2017, provides 2,4 million dollars in financial assistance to over 2,600 employees - a 41% increase over 2016.

As evidence of how much the companies have assumed responsibility for the lives of their employees, it is also appropriate to report the numerous initiatives taken by The Home Depot. In 2018, The Home Depot is launching an updated parental leave policy that provides six weeks of 100% paid leave to all parents, plus an additional six weeks of 100% paid maternity leave to all mothers at the birth of their children.

At Walgreens Boots Alliance, proactively supporting employee health and well-being is also a top priority. They recognize that they have a responsibility to enable their employees to receive high-quality care by providing them with the services, resources and the support they need. As the extent and ways in which healthcare is provided vary significantly by country, Walgreens Boots Alliance manages the healthcare and benefits offered to full-time and part-time employees nationwide. For example, in the United States, home to over 60% of employees, the company offers a comprehensive package of full-time employee benefits that typically includes: full medical and health benefits, employer matching to contributory retirement account defined, leisure and paid vacation, paid disability, employee stock purchase program, life insurance and employee discount. For Walgreens, engaging and collaborating with stakeholders helps address the most relevant sustainability issues. The company regularly consults with its internal and external stakeholders to ask for their feedback on performance in areas where Walgreens has the greatest economic, environmental and social impact. The company proactively involves stakeholders on issues where it believes it can have a significant impact, for example, in the field of health and well-being, as well as on topics in which they are aware of the changing expectations of society. Additionally, it seeks to interact with stakeholders representing a wide range of industries, geographies, organization types and sizes. The issues brought to attention are then forwarded to the CSR committee. In line with the US models just analyzed, is Walmart's experience, which also offers health benefits starting at around $ 26 per month for full-time and part-time employees who work an average of 30 hours per week for the past 12 months. Like Walgreens, Walmart also offers 401 (k)[1] contributions and provides full-time and part-time hourly U.S. associates with up to 6% match after one year on the job. Members are entitled to contribute to their 401 (k) from the first day of work. Other policies envisaged by the US giant are: Paid Time Off (PTO), Walmart's US PTO policy simplifies paid vacation, sick time, personal time and vacation into a single category; extended parental leave, which covers paid employees in the United States and full-time hourly employees. The company has been listed on Wall Street since 1972, making it inevitable to partner with its shareholders through: formal communications, quarterly earnings materials, Securities and Exchange Commission (SEC) documentation, investor conferences, investment community meetings, the annual shareholder report, the annual proxy statement and other information made available through the website. In addition, there are also shareholder awareness programs, which are conducted throughout the year to discuss corporate governance, executive compensation and other matters relating to Walmart's business strategy. The expansion of the importance of the family, social context and relationships with stakeholders for the entire sample analyzed, means that the gaps identified in the 2012 CSR reports are largely filled and sometimes overcome. In particular, Costco, which in 2012 made no reference to this aspect, today guarantees numerous services within the reach of all its employees with a portfolio of over 1,300 treatment and research centers of its own. Each reality has the primary objective of making its collaborators feel at home while they are in their workstations, guaranteeing healthy and efficient working conditions from the point of view of safety to avoid any type of accident at work. Finally, the detail that is left in the background in the 2012 reports (creating value for shareholders) takes on greater relevance in the 2018 CSR reports, as can be seen more from the experiences of Walmart.

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[1] In the United States, a 401 (k) plan is the defined contribution, tax-qualified retirement account defined in subsection 401 (k) of the Revenue Code.

### 3.3 Products and assortments - Relations with suppliers and degree of control

In the 2012 CSR reports, in relations with suppliers, the watchword for retailers is "responsible supply", or rather the imposition of quality and social ethical standards that establish long-term relationships of trust. To this end, retailers have a code of ethics or a detailed list of requirements ranging from respect for human (and, therefore, workers') rights to responsible management of the production chain. Along the supply chain there are four main areas in which responsible management of resources is activated: a) cultivation and production of products; b) logistics; c) site management; d) waste disposal. Suppliers must ensure quality, safe and healthy products and raw materials, minimize the environmental impact both in the production phase and in the transport of goods and in the waste disposal phase. In particular, Costco works to protect fish species and the marine ecosystem.

Suppliers are periodically checked (e.g., on the use of pesticides or substances potentially dangerous to human health) because the nutritional, organoleptic, technological and health quality of the products sold, as well as the reputation and credibility of retailers, depend on them.

Finally, collaborations with local suppliers increased in 2012. This is demonstrated by the presence, on almost all the shelves of the retailers considered, of products from local suppliers. In particular, Walmart and Costco have always prioritized local suppliers for all their products, especially food.

The relationship with suppliers is central to the development strategy of companies, because a relationship based on fairness and reciprocity guarantees higher standards in products and services. And it is precisely the quality of the products that represents the distinctive character, together with the quality of relations and the desire to be part of the social and economic community of the territories in which one is present. It is for this reason that in the 2018 CSR reports of the analyzed dealers, it can be found complete and detailed information regarding the relationships and the degree of control of suppliers. The increasingly stringent regulations in terms of control and selection of the supplier portfolio on the one hand and the preparation by companies of standards that require high levels of efficiency on the other, lead to increasingly accurate decisions and, where necessary, immediately stop any kind of collaboration undertaken.

In 2018, all retailers analyzed have a supplier rating system that is based on a detailed classification matrix on standards, which include: the prohibition of any form of forced or other labor and any form of slavery or trafficking human beings; opposition to discrimination in any form; working hours that do not exceed the applicable legal requirements; the prohibition of child labor; safe and healthy conditions; the prohibition of corruption; freedom of association and recognition of the right to collective bargaining; compliance with applicable laws and regulations on environmental protection; commitment to improve the sustainability of products. This list represents what are the qualified standards of primary importance from the different retailers. Subsequently, other issues and other requirements related to the specific case of the individual retailer and the country in which it operates are then shown.

Costco Wholesale Corporation is committed to protecting the labor rights and safety of the people who manufacture, process or collect the merchandise it sells, recognizing and respecting the cultural and legal differences found around the world. To this end, Costco expects its suppliers and facilities to comply, at a minimum, with all applicable labor, employment, health and safety, environmental laws and regulations of the country in which the merchandise is manufactured. In the absence of applicable laws and regulations, suppliers and facilities must meet the requirements set forth in the Costco Supplier Code of Conduct. This Code of Conduct applies to all suppliers who supply goods to Costco. The company tries to use suppliers who share their commitment and conducts audits of production facilities on its behalf in order to

monitor the commitment of suppliers to the Code. Costco also reserves the right to terminate the relationship with any supplier and / or facility that does not conform to established requirements and standards. Salient points of the code are: antitrust and competition laws; the United States Corrupt Foreign Practices Act; restrictions on insider trading; accounting, financial reporting and internal control rules; laws on health, safety and the environment. Kroger has programs in place to hold its suppliers accountable for compliance with standards through assessments of environmental, social and human rights practices, as well as working to improve the traceability of its brand products. Kroger monitors its supply chain for social and environmental impacts in several ways. Many of the company's commitments and programs are aligned with specific environmental and social certification schemes to provide clarity and credibility. Kroger organizes social compliance audits, designed to verify the alignment of its suppliers with the supplier's Code of Conduct. Suppliers must, upon registration, accept the supplier code of conduct provided by the company to become part of the Kroger supplier hub. The Code informs them that the structures they manage or subcontract may be subject to social compliance audits. Factory visits are guided by Kroger's audit content and conducted by a company-approved third-party audit firm over a five-day audit window. Kroger requires social compliance audits for all own-label products (food and non-food products), for non-branded products (such as bulk products) processed in facilities outside the United States, and for imported domestic brand products. Additionally, Kroger requires all beef, pork, chicken, turkey and egg suppliers to provide evidence of an annual animal welfare audit and they must align with animal welfare standards and be conducted by independent commercial third-party auditing firms.

### 3.4 Products and assortments – Consumer protection

Consumer protection by retailers manifests itself in many ways, through the guarantee of hygiene and safety, product labeling, packaging care, the full range of organic products and own brand products.

In addition to having suppliers demonstrate compliance with strict manufacturing standards for food safety, Walmart supports research and develops additional food and raw material safety requirements that are science-based. A front icon to help consumers easily and quickly identify healthier food options. Kroger conducts a food safety check every two months in each of its stores, through external companies, and the results are checked with the same rigor with which the financial ones are checked. Kroger also guarantees security to its customers through its 24/7 service for the removal of "problematic" products from its stores, based on industry and government standards. The company is a leader in this field and is one of the first to create a customer notification service for certain types of product collection (using the database created with the data of loyal customers). Kroger offers thousands of natural, organic and eco-friendly products. Among others, for attention to the protection of animal welfare, it offers free-range eggs, sells only milk from cows not treated with the artificial hormone BST and supports the sustainable food program. In Kroger stores there are pharmacists who provide not only advice on drugs, but also brochures for their disposal. In some points of sale there are "Little Clinics" (medical micro-clinics) with specialized staff ready to help families. Kroger also extends the training to its customers by providing information sheets with advice and general information on food safety at home (how to cook them or at what temperature to keep them).

For retailers, product safety is the first commitment to consumers. At a minimum, all retailers comply with national legislation and safety and hygiene regulations, but established internal regulations often go beyond those required by legislation. In fact, most companies use a special management system that allows them to identify any suspicious products, remove them from sale, and inform customers about the products that need to be returned.

As already mentioned, customer protection is also achieved by creating innovative packaging that is sustainable (for example by reducing or eliminating unnecessary outer envelopes or using recycled materials), easy to use, useful for rapid product recognition, which contains nutritional information and communicates a healthy lifestyle. In this regard, Costco creates sustainable, easily manufactured (or recyclable) and resistant packaging.

As for the results that emerged from the comparison of the data relating to the 2018 CSR reports, the actions that retailers constantly take to ensure full consumer protection are varied.

In particular, Costco, Walgreens, and Walmart have one thing in common, namely the How2Recycle label, a US-based recycling label standardization program. The How2Recycle label identifies each part of the package and how to recycle it for optimal recovery, thus allowing consumers to know where and how to recycle the packaging.

At Walmart, the "Gigaton" project invites suppliers to avoid emissions as well as reduce waste by reducing unnecessary packaging, optimizing packaging materials and increasing reuse and recycling of the same. Walmart is specifically targeting plastics, with extensive waste reduction commitments for its US private brands. In fiscal year 2019, over 800 Walmart private label suppliers subscribe to the How2Recycle label (compared to just 100 in fiscal year 2018) and over 16,000 inventory units receive the label.

Costco, on the other hand, offers sustainable packaging that protects the product, complies with laws and regulations, reduces materials and communicates this effectively. Costco is also looking for opportunities to reuse packaging, identify the materials used so that the packaging can be recycled or composted, and find already recycled content. Costco's innovation in the packaging industry keeps this area in continuous and dynamic improvement. The goal is that all plastic is made from recyclable PET or recycled plastic. It also offers fiber and corrugated packaging, recognizing that there is a limited supply of certified fiber, encourages the use of recycled content whenever possible. Costco offers global packaging by developing, through its purchasing team, a standard packaging format for use in multiple countries. This has the advantage of reducing the amount of packaging waste in the production process and eliminating the costs and packaging cycles of individual countries. In 2018, Costco creates a global recycling banner for these global packaging items to help understand when to recycle them.

The Home Depot packaging team works with private label product suppliers to apply science to creating better packaging. The goal is to reduce the ecological footprint of packages and use more sustainable materials. In 2018, THD redesigned 134 packaging to reduce size and materials. The Home Depot's "Eco Options" program helps customers identify products that have less impact on the environment and encourages suppliers to develop more sustainable offerings. Eco Options was launched in 2007 in partnership with "SCS Global Services", a leading, independent, third-party certification body that validates environmental claims. Today, Eco Options branded products are over 25,000. In 2017, the chemical strategy was also published for the first time, which represents an important part of the commitment to offer greener products. Strategy that guides the company's efforts to work with suppliers to reduce the impact of chemicals used in products. The publication is a milestone made possible by what the company learns in a decade of attention to sustainability. In 2018, Kroger continues to expand its digital reach and enhance the digital shopping experience to offer customers the products they love, as well as weekly ads, digital coupons, recipes, rewards, smart shopping lists and more. thanks also to the launch of the Kroger mobile app. The collection and delivery coverage area now exceeds 93% of customers. Kroger has long been a leader in customer satisfaction by creating unique and personalized shopping experiences that drive loyalty. Each year, it provides over three billion personalized recommendations through the customer analytics team. Kroger is creating a seamless digital shopping experience for its customers so they can access everything, anytime, anywhere. Kroger offers several options for ordering and

delivery, such as "Kroger pickup" which gives customers the ability to order online and collect in nearly 1,700 stores. Through the partnership with "Instacart", it offers delivery in 2,126 locations. "Kroger Ship", its B2C e-commerce platform, extends reach to even more customers across the country. How it improves health and nutrition is important to Kroger and its stakeholders, so the president of Kroger Pharmacy and The Little Clinic oversees health and nutrition strategies and programs. 18 dieticians on staff and about 60 nutritional technicians in the store promote and develop health and wellness initiatives throughout the company and in stores. Sustainable packaging is a fundamental principle of the zero-waste vision. Following the reduction, reuse and recycling approach, it is working to reduce the environmental impacts of product packaging. Key priorities include reducing unnecessary packaging, increasing the recyclability of packaging and increasing the amount of recycled content and certified fiber, supporting the community in building better infrastructure and offering customers options for recycling. Through its "Zero Hunger / Zero Waste" social impact plan, Kroger is committed to finding innovative solutions to help end hunger and eliminate waste in the communities in which it operates. This is why Kroger is also a U.S. grocery retail partner for Loop, the revolutionary new circular e-commerce platform that is advancing Kroger's zero waste vision by reducing single-use plastics in the environment. Several Kroger plastic packaging items, as well as many other items, are recyclable in plastic film recycling bins located in Kroger store lobbies. Collected items, such as disposable plastic grocery bags and bread bags, are recycled into new items and transformed into composite lumber or hi-tech wood.

### 3.5 Products and assortments – Communications policies

With regard to communication policies, the analysis conducted for the 2012 CSR reports highlights a general trend towards a commitment by retailers to carry out their activities towards other economic operators on the market, opposing acts of unfair competition and respecting the national antitrust legislation. Indeed, the analyzed retailers try to sensitize the consumer towards sustainable development by improving their CSR initiatives and policies to improve their image and reputation. Resellers understand that information must be accurate, correct, easily understandable, compliant with misleading advertising law, and communicated clearly and transparently. However, investments in communication and advertising initiatives are quite different.

The Retail sector presents an extremely competitive market, which is constantly changing and materializes with the emergence of large distribution brands, the emergence of new sales channels and the ever-increasing needs of customers. Sales processes become more and more complex and those who work closely with customers must have the tools and information necessary to understand purchasing habits and needs to increase sales opportunities.

In 2018, in the CSR reports of some analyzed companies, no data emerged to the point of being able to define real considerations.

In the last ten years, social media has changed the way in which brands and consumers interact, giving greater importance to consumer opinion, such as to require a customer-oriented approach, and placing ever higher expectations of brands, which must be authentic, respond to consumer concerns and take a stand on issues relevant to social and cultural responsibility. Consumer confidence has become crucial to brand success. Faced with the implementation of new technologies and services to improve the consumer experience, companies must therefore consider being authentic and reliable among their priorities, always having an eye on the security of consumer data. On the other hand, it is not easy for retailers to gain consumer trust in their brand. It is an activity that involves understanding each individual consumer and constantly satisfying their expectations. For example, Kroger uses powerful statistical systems to track consumer behavior trends, which allow it to tailor its digital offers and promotions to

individual shoppers. However, this is not always enough. Transparency as regards suppliers and materials used, reliability, constant quality of products and services and genuine commitment to charitable activities are also fundamental. Attracting consumer confidence is important not only for new brands that are about to be launched, but also for established brands such as the companies in the analyzed sample.

### *3.6 Social commitment – Charities, community services and educational initiatives*

The social commitment of retailers in local communities is divided into two types of actions: on the one hand there are solidarity and charity initiatives, fundraising and community services and on the other there are educational awareness activities.

Solidarity and charitable initiatives are developed both locally and internationally. In 2012, each of the retailers analyzed creates a foundation that deals with solidarity projects, fundraising or food distribution for people in need. Walmart and Costco donate unsold, near-expiry or damaged packaging products to associations to provide the opportunity to feed families living in poverty. The Walmart Foundation is committed to meeting the needs of under-served populations in the United States and supports organizations that positively impact local communities. Through financial contributions, in-kind donations and volunteer work, Walmart and its associates are committed to operating globally and giving back locally. When natural disasters like hurricanes or earthquakes hit people hard, the Walmart Foundation steps in by donating food and helping rebuild destroyed homes. An increasing number of children from socially disadvantaged or orphaned families are unable to receive toys at Christmas or equipment when they start school. Costco promotes access to medical care for children through United Way and Children's Hospital and works proactively to create local jobs through the Costco Scholarship Fund. Walmart on the other hand, is very committed to food education. With their campaigns they propose a healthy and correct lifestyle, as well as encouraging sporting activity. In addition, among the initiatives to educate the population to respect the environment, the "Water Sense" project activated by The Home Depot, aimed at saving water consumption, should also be mentioned.

In the 2018 CSR reports, the charity and awareness initiatives implemented by retailers have increased considerably, but above all they are largely detailed compared to the past. For people in difficulty, being a responsible business means being close to people not only at the time of purchase, but also in critical situations.

Costco's commitment is to be active in local communities. The company expects 1% of pre-tax profits to be donated to selected charitable contributions focused on children, education, health and human services. In 2018, it continues to contribute over 39 million dollars to the aforementioned organizations, United Way, Costco Scholarship Fund and the new Children's Miracle Network Hospitals. Since 2012, Costco has partnered with New Eyes for the Needy to support its overseas program. Costco ships used glasses and hearing aids to "New Eyes," where they are sorted, tested and repackaged for distribution to those in need around the world. Annual donations are approximately 260,000 used eyeglasses and 1,800 hearing aids. Most often, glasses are the first and only pair of glasses that recipients have ever owned. The World Vision program to donate non-food items to people in need continues to grow and the company donated 41,945 pallets of products in 18 international countries in fiscal year 2018. Additionally, throughout the world, Costco's offices donate edible food items to food banks and other nonprofits in their local communities. In order to further reduce food waste and provide food to the needy in the United States, Costco expands its program with "Feeding America", a non-profit organization based in the United States that works with local food banks to provide food pantries, canteens and shelters for more than 37 million people. The organization leads the nation in the fight against hunger. In fiscal year 2018, Costco donated more than $ 34.7 million

worth of edible food products in all states in which it operates, which represents approximately 29 million meals for people in need. Also in the 2018 fiscal year, it made cash contributions of $ 1.75 million. Like Costco, Walmart and Kroger are also part of Feeding America's visionary partners. Walmart and the Walmart Foundation have invested over $ 100 million in Feeding America since 2005 to provide charitable meals, develop infrastructure, and build essential programs. These investments provide funding for equipment, trucks and logistics expertise to help food banks at the forefront of providing charitable food to extend their reach and impact. Kroger partners with Feeding America to complete the new "Zero Hunger / Zero Waste" plan by 2025. This program addresses a fundamental nonsense in the American food system: about 40% of food produced in the United States is thrown away, yet an out of eight Americans live hunger. As an American grocer, Kroger believes it has the size, scope, experience and dedicated collaborators to address this paradox. Zero Hunger / Zero Waste represents the vision of the company today.

In fiscal year 2018, Walgreens Boots Alliance diverts more than 1.5 million kilograms of products from landfills in the United States by donating them to Feeding America. Donations of unsold or discontinued products that have been screened for safety include food and household items that often cannot be purchased through government assistance programs. The Walgreens Health Analytics research and reporting team collaborates with academic institutions and scientific researchers on numerous studies, with the aim of helping to improve patient care while reducing healthcare costs. Numerous other initiatives are being implemented by the company. Every day, according to a study by the United States Department of Veterans Affairs (VA), about 20 U.S. military veterans die from suicide. Walgreens works with the VA and The Veterans of Foreign Wars of the US (VFW) to reduce this number through community disclosure of service organizations available to veterans. For the eighth consecutive year, in recognition of the US National HIV Testing Day, Walgreens and the Greater Than AIDS public information campaign are teaming up to offer free HIV testing. On June 27, 2018, the test is made available in over 300 Walgreens stores in 180 cities. In recent years, Walgreens has partnered with the Centers for Disease Control and Prevention (CDC) and the National Safety Council (NSC) to help reduce falls for older people. According to the CDC, falls are the leading cause of serious and even fatal injuries among adults aged 65 and over.

As for educational activities to raise awareness in the communities in which the retailers themselves operate, some companies show different types of actions in their 2018 CSR reports, from sports to food, from the environment to food waste.

Finally, Walgreens' experience with Boots Ireland, which participates for the second year in "See Change", an alliance of over one hundred organizations that work together, through the National Stigma Reduction Partnership, to bring about positive changes in attitudes towards of people with mental health difficulties. Stores participate in See Change's "Green Ribbon" campaign, which provides customers with over 45,000 green ribbons to promote conversations and break down mental health stigma. For this partnership, Boots Ireland wins excellence in the Workplace category at the Chambers Ireland 2018 CSR Awards.

### 3.7 Environmental commitment – Energy saving, emissions, waste and recycling

To be truly responsible and gain the trust and loyalty of consumers and stakeholders, retailers must also preserve the environment around them. Unlike the previous paragraphs, the analysis of the 2012 CSR reports on environmental commitment, understood in its broadest sense, shows how companies are already particularly active with the various measures taken in the first decade of the 21st century.

Analysis of the 2012 reports shows that companies try to save energy through centralized management systems that automatically adjust heating, air conditioning and lighting according

to needs and monitor consumption, avoiding waste. Another front on which the analyzed retailers are committed is the reduction of pollution due to the transport of goods and separate waste collection through the installation of recycling areas inside the stores. To understand better, let's see individually the Carbon footprint of the retailers analyzed. At Walmart, renewable energy projects provide 1.1 billion kilowatt hours (kWh) per year, or about 4% of the electricity for the company's buildings globally. The grid provides another 18%, for a total of 22% renewable electricity as of 2010. Walmart has 180 renewable energy projects in operation or in development and continues to test solar energy, fuel cells, off-site wind projects and green energy. Walmart focuses on helping suppliers identify and implement packaging solutions to create zero waste and achieve packaging neutrality, where it is recyclable, reusable or renewable. By developing a smaller, reusable package, the supplier is able to ship more products per truck. The Super Sandwich Bale (SSB) program allows the recycling of cardboard, paper, aluminum, plastic bags and other items. Items not suitable for SSB, including wooden, plastic and polystyrene pallets, are sent to return centers for reuse or recycling.

From 2000 to 2012, energy consumption in Kroger stores decreased by 31% thanks to the installation of LED lights, motion sensors for switching on the lights and the use of "natural" light through a system of skylights. Kroger aims at greater efficiency in transport by reducing the so-called "Empty miles" and to eliminate excess waste by increasing recycling efforts. Since 2009, waste has been reduced by 67.4%.

Since 2006, in an effort to clean up the community environments where Walgreen stores operate, Walgreens has partnered with IMAGINiT Technologies to bring solar power systems to two distribution centers and 100 stores. This greatly reduces the amount of electricity supplied by external sources. Distribution centers and facilities in California produce 20 to 50 percent of their electricity from the solar power system. In 2010, Walgreens recycled over 31 million kilograms of cardboard, which is equivalent to the weight of 2,909 school buses. If all of the shrinkage Walgreens recycles were placed in one roll, it would span 30,770 kilometers - more than three-quarters worldwide.

The Home Depot collects and uses recycled materials extensively in its business. It sells Energy Star certified products and products that respect environmental sustainability, with the Eco options brand.

Costco in 2007 created the Corporate Sustainability and Energy Group (CSEG) to evaluate, develop, implement and report on its environmental management efforts. CSEG's mission is to help Costco-branded companies to operate in an environmentally and socially responsible and sustainable way, reduce the use of resources and the generation of company waste. Some of the highlights and ongoing efforts of the CSEG are as follows: 1) Greenhouse Gas Reduction Program. In 2008, Costco completely discontinued the use of hydrochlorofluorocarbon refrigerant in refrigeration systems and air conditioning systems. During 2007, Costco completes a basic inventory of greenhouse gas emissions that meets the standards set by the GHG Corporate Accounting and Reporting Standard. 2) Sustainable construction and renewable energy. The Leadership in Energy and Environmental Design (LEED) organization, the US energy efficiency and ecological footprint classification system of buildings, has a certification program that is nationally accepted as a benchmark for design and the construction of ecological buildings. In addition, the tons of waste that warehouses generate each week in the form of cardboard, plastic, unusable products and other materials, many of which once used are discarded, are now being refurbished into usable products, recycled into biofuels or compost, or used as feed. 4) High energy efficiency products and innovative packaging. Packaging is also more environmentally sustainable. In collaboration with suppliers, it actively pursues opportunities to remove polyvinyl chloride (PVC) plastic from packaging and replace it with recycled or recyclable materials. Likewise, changes in the design of innovative

packaging make it possible to increase the quantity of product on a pallet, resulting in a reduction in delivery trucks on the road. 5) Commuting. Costco encourages employees to carpool or vanpool whenever possible to reduce energy consumption and reduce emissions to the atmosphere.

The analysis for the 2018 CSR reports follows, for convenience, the same sequence just seen. Walmart is the first retailer to announce a scientific goal to reduce greenhouse gases in line with the Paris agreement. The goal is an 18% reduction by 2025 (compared to 2015 levels), through multiple initiatives. These include increasing the energy efficiency of buildings, with the goal of powering 50% of operations with renewable energy by 2025, improving the performance of refrigeration systems and maximizing fleet sustainability. As of 2017, it reduces emissions by 6.1% compared to 2015 levels. In addition, renewable sources provide approximately 28% of global electricity needs; this includes generating over 520 projects in eight countries, 18 US states and Puerto Rico. Based on the pipeline of solar and wind projects, it plans to supply 35% of its electricity from renewable energy sources by 2020. In addition to direct operations, it aims to galvanize transformative action through the "Gigaton" project, a global effort that invites suppliers to join Walmart in its commitment to avoid one billion tons of emissions in collective value chains by 2030. Launched in 2017, the "Gigaton" project engages with suppliers to set goals and pursue initiatives to avoid emissions in any of the six areas where there are opportunities to do so: energy use, sustainable agriculture, waste, deforestation, packaging and product use.

Kroger uses the Environmental Protection Agency (EPA) waste management hierarchy to guide its work. The goal is to move waste management in the hierarchy as much as possible: adopt reduction, reuse and recycling before sending waste to landfill. Tracking, synthesizing and analyzing waste management data is critical to making progress on zero waste goals. Kroger has joined EPA's nationally recognized "WasteWise" program and uses their reporting tool to consistently measure and track progress over time. Kroger focuses on improving energy efficiency in supermarkets with the goal of achieving electricity savings of 40% by 2020. In 2018, Kroger received the "US EPA ENERGY STAR Partner of the Year" award for adopting a continuous energy management strategy across the organization's entire portfolio of buildings and plants. At the end of 2018, 818 stores are certified as Energy Star buildings. The current results are in line with the objectives, as, in 2018 alone, there was an electricity saving of 44.9%. This result saves over two billion kWh in stores. In 2018, Kroger launches construction of the largest solar power plant ever built to date at its 5,000-square-foot Paramount, California distribution center. When fully operational, the array can generate 4.28 million kWh of clean energy annually. Collectively, Kroger's solar and wind plants generate over 14.59 million kWh of renewable energy in 2018. In addition, it also implements two anaerobic digesters that process organic waste and wastewater and produce renewable biogas as a by-product.

Kroger makes significant progress towards the goal of zero food waste. In 2018, it conducts food waste analysis, using the World Resources Institute's Food Loss and Waste Protocol. Thanks to dedicated collaborators, they have managed to reduce the overall production of such waste, greater diversion from landfills and greater recycling. Walgreens invests over $ 115 million in energy efficiency programs, including projects in approximately 2,500 stores. Walgreens Boots Alliance operations generate nearly 17,000 kWh of electricity through solar panels during fiscal 2018, primarily from solar plants in 240 stores and distribution centers. Walgreens also involves employees, customers and suppliers in reducing energy. One example is Walgreens Boots Alliance's innovative "EnergyCare" program. The program is designed to educate employees about energy waste and encourage an energy-conscious culture. The program helps reduce emissions by encouraging energy targets, investing and implementing energy-efficient technologies and proactive energy supply management, and developing

renewable energy standards. Walgreens continues to actively pursue the Consumer Goods Forum's commitment to the second refrigeration resolution to phase out gases with high global warming potential, allowing all new refrigeration plants to use only natural or ultra-low impact refrigerants by the end of 2025.

The Home Depot uses the GHG Corporate Accounting and Reporting Standard protocol, which is adopted by more than 90% of Fortune Global 500 companies, to calculate tons of greenhouse gas emissions and efforts to reduce them. Continuously review and refine emissions measurements to reflect business changes and improvements in data collection and reporting. Receives an A rating from Carbon Disclosure Project (CDP), reflecting the high level of action on climate change mitigation, adaptation and transparency in 2017. CDP also names The Home Depot as an industry leader (Walmart, which is the retailer par excellence, has a score of A). THD is committed to reducing carbon dioxide emissions by 2.1% per year to achieve a reduction of 39.9% by 2030 and a reduction of 50.4% by 2035. Costco's Business Delivery Fleet extends its internal initiative called "Truck of the Future" aimed at maximizing efficiency in growing delivery fleets. In 2018, Costco successfully field tested a customized vehicle with "Penske Truck Leasing", which improves payload capacity while reducing weight. Costco corporate delivery centers implement procedures to use plug-in ground power, connecting to the grid to allow refrigerated trucks to maintain temperature during loading and storage. This eliminates the previous practice of running the reefer diesel engine, thereby saving fuel and eliminating carbon emissions of more than 70% for every truck using power on the ground. Since 2008, Costco has collaborated with APANA to implement an intelligent water management system. Costco continues to promote operational efficiency by using this program to reduce overall operating costs through the elimination of water waste and the use of sewers. Ultimately, this reduces the associated energy and maintenance costs. Using the "APANA" program, Costco is able to monitor water use in real time, detect inefficient consumption and guide operators to quickly identify and reduce waste. Water management systems are currently installed in all warehouses in North America and Japan. Costco plans to expand these systems to Australia, Asia and Europe. Costco also uses waste to generate energy. Costco currently has 46 locations in the United States that send waste to a waste-to-energy facility. This program represents $ 43.7 million of post-recycled waste that generates 12,011,368 kWh of renewable energy, enough to power 12,534 homes for one month. Much organic waste (inedible food waste) is now recycled into usable products, such as organic fertilizers, compost, pet food, biofuels and electricity. Additionally, Costco is able to recycle $ 1.7 million worth of scrap metal, which has returned to local commodity markets to be transformed into something new.

## 4. Conclusions

The approach to Corporate Social Responsibility has changed considerably over time. Today more than ever, many organizations realize that in order to legitimize their work in the market it is no longer enough to ensure a return only in terms of performance. Consumers and investors are increasingly informed and want companies to take responsibility for the pressure exerted on the planet and its population. On the other hand, the growing technological and digital innovation that has characterized the last few years, especially environmental, green and clean technologies, allow a growing diffusion of sustainable development worldwide. Taking a voluntary path towards Corporate Social Responsibility, also considering the growing increase in the rules drawn up to protect the environment and workers, can allow companies to be ready to face future regulatory tightening and obtain a strong competitive advantage.

The sample analyzed, composed of the 5 main US retailers allows to define what are the CSR actions implemented by some of the largest companies of retail trade in the world. The

commitment on the social and environmental front of companies considered is aimed at producing long-term collective benefits and is not reduced to formal and facade interventions adopted in the short term mainly for opportunistic purposes.

Sometimes companies consider sustainability as a goal to be achieved, but from the results of the study, analyzing the different time period 2012-2018, it can be seen that it is not an achievable goal, but a prolonged path, during which the company and its stakeholders try to improve each other continuously.

The study shows the main CSR policies adopted from the US leaders in the retail sector, and while sometimes results of these policies adoption is tangible, in the majority of times, there is a difficulty in measuring results, since typically the return generated by CSR policies is reputational and therefore intangible. Hence, it would be relevant to develop a complete CSR strategy also to evaluate the perception of its customers. All companies, in interfacing with their interlocutors, adopt behaviors that lead stakeholders to formulate a value judgment. It is dangerous for a company to believe that its actions do not have an impact on its reputation. While in the past, to build trust with consumers it was enough to provide quality products, now companies must consider the aspirations of their customers, since issues such as authenticity, community building and data security have become fundamental pillars of trust. Facing these challenges would ensure consumer trust and therefore the development of a CSR strategy that would allow to maintain a prominent position on the business' reference markets.

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# POVERTY AND UNEMPLOYMENT IN NIGERIA: THE CASE FOR ADVANCEMENT OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET)

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## *Abstract*

*One of the main reasons for increasing levels of poverty and unemployment in Nigeria is the lack of skilled human capital. Thus, Nigeria has remained slow in its development trajectory not only because of lack of technology but also due to the fact that the country's large population does not possess relevant skills required for development in a fast globalising world. Despite successive governments' programmes towards ameliorating the conditions of the citizens by reducing poverty and unemployment, the rising cases reveal that much still needs to be done. There is therefore need for more studies aimed at proffering meaningful suggestions for informing policies to address these problems in Nigeria. This is imperative because of the country's growing population and also the consequences of poverty and unemployment for peace, security, stability and development of Nigeria. This paper furthers the discourse on strengthening Technical Vocational Education and Training (TVET) as strategy for addressing the issues of poverty and unemployment in Nigeria. Its argument is anchored on the Human Capital Theory of Gary S. Becker. The objective of the paper is to examine the connection between TVET, human capital and skills development; and to highlight the challenges and prospects of TVET in Nigeria's skills development agenda.*
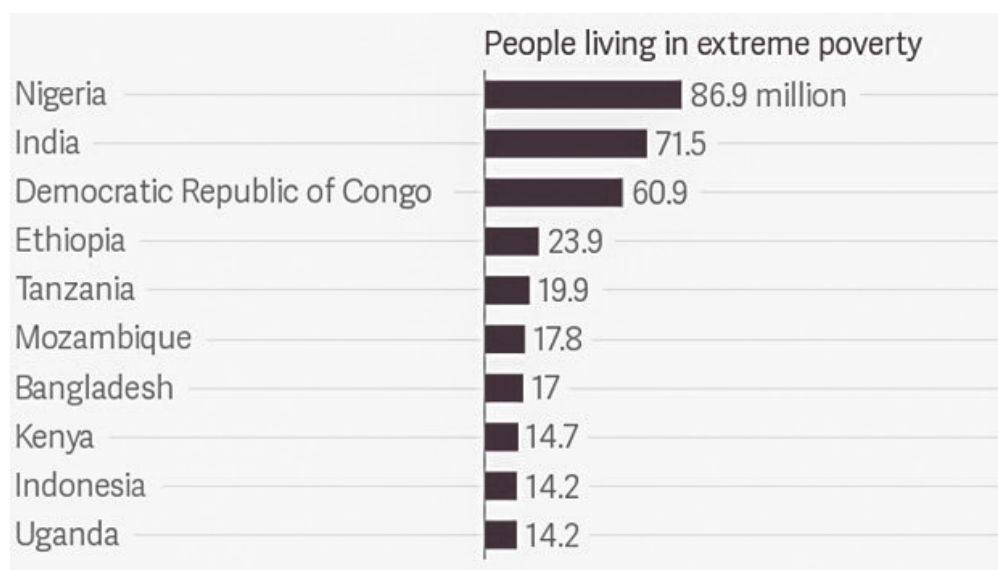
## 1. Introduction

Nigeria is endowed with vast natural and material resources, yet the country has been described as the poverty capital of the world with an estimated population of 87 million people in extreme poverty (see, Demuren, 2018; Iheonu and Urama, 2019). The increasing level of poverty shows that the issue of poverty reduction has remained a challenge in Nigeria despite the policies of successive governments (Figure 1).

Figure 1– Nigeria's poverty level – 2018



Source: ATLAS/Data World Poverty Clock

On another note, Nigeria has an estimated population of 206,786,196 million people in 2020 (Worldmeters.info/world-population/Nigeria-population/). Its population could trigger industrial production and also provide a large workforce for economic development if a large percentage were 'appropriately skilled'. However, the country lags behind in economic and social progress (Figure 2). For instance, despite being the country with Africa's biggest economy, "Nigeria's Human Development Index for 2018 was 0.534 which put the country in the low development category – positioning it at 158 out of the 189 countries and territories" (UNDP, 2019: 2). Education for all has remained elusive despite annual budgetary allocations (Leke et al, 2014). Healthcare facilities are out of reach of the majority (AU/APRM, 2009: 274-318; Obokoh, 2019); housing is a far cry from the desire of many (AU/APRM, 2009: 274-318; Emiedafe, 2015); food is yet on the table of all (USAID, 2020), and as figure 2 shows, unemployment is rising (National Bureau of Statistics, 2020).

Figure 2 – Unemployment in Nigeria
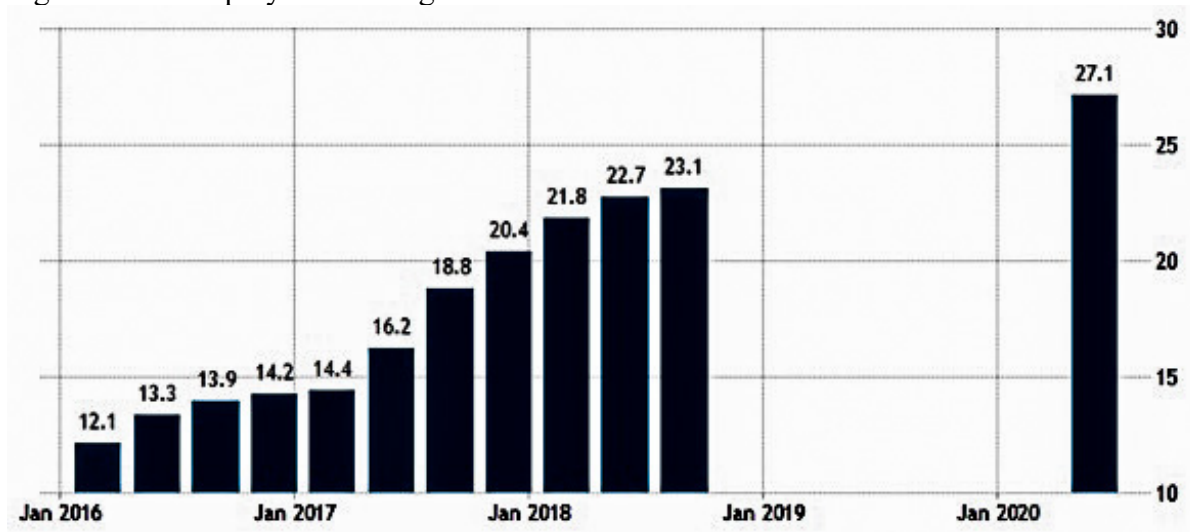


Source: TradingEconomics.com/National Bureau of Statistics, Nigeria, 2020.

The authors observe that while the large population of China and India have made these countries to become emerging markets and their skills have become advantageous and are being exported all over the world (Cong and Wang, 2012), this is not the case with Nigeria. This paper therefore aims to examine why Nigeria has failed to produce adequate manpower in the country, with the large number of universities (Federal, State as well as Private) and other skills development institutions established in the country. Skills shortages and mismatches abound in the industrial and service sectors and over 60 per cent of the labour force is classified as unskilled and untrained in Nigeria (Ahmed Rufai, 2012; Industrial Training Fund/UNIDO, 2016). An issue of concern in this paper is how the increasing levels of poverty and unemployment, and the country's challenge in developing skilled human capital could be addressed.

Some analysts have argued that national industrial skills development is of utmost importance to Nigeria's quest for development (Federal Republic of Nigeria, 2009; Gyang, 2011; Ogundele and Abiola, 2012; Ogbunaya and Udoudo, 2015; Akanbi, 2017; Rufai, 2020). The multiplier effects of skilled manpower for a society is far beyond physical employment and economic growth but manifest in several aspects of the social life of the people. These results are consistent across a wide range of countries, confirming that skills have a profound relationship with economic and social outcomes across a wide range of contexts and institutions (OECD, 2012a; Ghalandarzehi and Safdarie, 2012; Perepelkin, Perepelkina and Morozova, 2016). Skills are keys to tackling inequality, promoting social mobility and inclusive growth (Cong and Wang, 2012; OECD, 2012a). However, while investments in basic education and skills have positive correlations with economic development in other parts of the world, the experience is not the same in Nigeria. The question raised in this paper is: Why has inadequate skilled human resource remained a problem in many sectors in Nigeria despite the country's efforts at ensuring skills and human resource development. Employing a thematic discourse analysis, the main finding in this paper is that several problems confronting the educational sector and other skills development institutions particularly with regards to TVET in Nigeria, have triggered poverty and unemployment in Nigeria. The paper concludes that issues of poverty and unemployment in Nigeria (which retards the country's development efforts) will

be ameliorated if all stake-holders in the educational sector and skills development institutions work towards strengthening and repositioning TVET in the country.

## 2. Theoretical and Empirical Literature

### 2.1 The Salient issues of Poverty and Unemployment

Poverty has been defined by different scholars, writers and agencies from different perspectives, as such there is no unified definition of the concept. However, the most conventional approach for defining poverty is to measure it in monetary term, by comparing an individual's income or consumption with some defined threshold below which they are considered to be poor (World Bank, 2005; World Vision, 2020). The United Nations (2017:63-85) notes that often poverty is defined in relative or absolute terms. Absolute poverty measures poverty in relation to the amount of money necessary to meet basic needs such as food, clothing and shelter. Relative poverty defines poverty in relation to the economic status of other members of the society. People are poor if they fall below prevailing standards of living in a given societal context.

Ravellion and Bidani (1993:3) look at poverty as the inability to have command over basic needs of life such as clothing, food, shelter, among other things. It should be noted that the inability of individuals to access these basic needs has negative consequences on their physical and socio-psychological wellbeing. Poverty, however, is not about money alone, it includes issues of access to services such as health care and education, marginalization and exclusion (World Vision, 2020). Poverty represents a socio-psychological state that is undesirable (Jiboku and Jiboku, 2009). It is an undesirable state one can find himself in because of its multiplier effects that are negatively inclined. Socially, poverty tends to alienate an individual from others. The poor has little relationship with their fellows. A poor person does not see himself or herself fitting with others and as a result does not see himself or herself as having ideas that are relevant to the development of society (Mood and Jonsson, 2016). With an individual's partial self-ostracization from the society, avenues for empowerment which can emanate from different interactions and associations are lost. Contributions that the poor ought to make in decision making that relates to their wellbeing are made by others who may not fill the pinch of the shoes like they would have ordinarily felt (Sida, 2002). Among several reasons adduced for poverty are an exorbitant cost of living as a result of inflation, high rate of unemployment, government's failure to provide basic social amenities, early and child marriages, ill-health, lack of storage facilities, crude implements, reckless spending and above all illiteracy, and low level of education (Abimbola, Orembi and Adekeye, 2005; Ajakaiye and Olomola, 2003; Odumosu et al., 2003).

On the other hand, unemployment is the condition where a person who is educated or uneducated is without work in order to earn a living (Agaba, 2018). The International Labour Organisation (ILO, 2019a) states that "persons in unemployment are defined as all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity" (ILO, 2019:6). Okafor (2011:361) defined unemployment simply as describing a condition of people who are without jobs. This condition is prevalent among youths in Nigeria who constitute a majority of the population. As such youth employment has been described as the "conglomerate of youths with diverse background, willing and able to work, but cannot find any" (Okafor, 2011:361). Drawing from these definitions, it is possible to deduce that unemployment does not have to do only with those that are educated and possessed necessary certificates, the uneducated and unskilled individuals are also affected (Agaba, 2018). In Nigeria, the unemployment rate has increased as many graduates churned out from the different universities are without jobs. Even so, while some of the graduates who applied for the white-

collar jobs were subjected to different forms of screening processes before they were offered employment, others among the applicants were described derogatorily as unemployable after four years of rigorous training obtained from the universities. With their university degrees, some graduates have remained unemployed for many years while a few others are engaged in menial jobs and other 'undeserving' jobs (which is tantamount to underemployment) in order to survive (Sobowale, 2015). Okafor (2011:359) notes that many youths who ordinarily would have been productively engaged in some enterprise are engaged in hawking on the Nigerian streets in order to make ends meet. Even the self-employed individuals experience several challenges in the country due to inadequate infrastructure required for them to carry on in their trades (Okafor, 2011; Akande, 2014).

It is important to highlight some forms of unemployment which have been identified in literature.

- *Cyclical unemployment* occurs when there is lack of demand for labour as a result of the fact that the economy is not viable enough to provide jobs for everyone who wants to work. It is found during periods of economic recession or very sluggish economic growth. Firms cut back on their production and engage fewer workers or lay off workers (Agaba, 2018; Skenderi and Uka, 2015).
- *Structural unemployment* arises as a result of change of the structure of the economy and the labour market cannot provide jobs for everyone that seeks employment. It also happens as a result of labour demand and supply mismatch (Skenderi and Uka, 2015).
- *Frictional unemployment* implies that some people are between jobs. Some leave one job to look for a better one while some others have just entered the labour market (Skenderi and Uka, 2015). According to Agaba (2018:202), frictional unemployment occurs between the time an individual is searching for a job and the time such individual finds one. It is a temporary condition (Adesina, 2013). It is like a structural unemployment but it is short run in nature while structural unemployment has lasting effect (Akeju and Olanipekun, 2014).
- *Classical unemployment* takes place when real wage for a job are kept above the equilibrium or market clearing level. When this happens the number of job seekers tends to exceed the available job vacancies (Agaba, 2018). Voluntary employment as the name implies is attributed to an individual's decision not to take a job (Agaba, 2018).
- *Seasonal unemployment* occurs because work cannot continue throughout an entire period. It could be due to lack of demand for manufactured goods, weather conditions and so on (Skenderi and Uka, 2015).
- *Residual unemployment*, according to Adesina (2013:148) is caused by personal factors such as old age, physical or mental disability, poor work attitudes and inadequate training".
- *Disguised unemployment or underemployment* is a situation where an individual is not in full employment making full use of his/her skills and abilities. Such employment could be part-time (Adesina, 2013:148). According to Dhanani (2004:22), "underemployment includes all individuals who worked less than normal hours and who, in addition, wanted to work more hours".

Poverty and Unemployment are global problems. However, they remain much more endemic among Third World Countries, particularly those in Africa with rising cases in Nigeria (Okafor, 2011; Sileika and Bekeryte, 2013). Different studies have found a strong connection with poverty and unemployment and establish that both variables reinforce each other. In other words, poverty is a social problem partly caused by unemployment and unemployment leads

to, and worsens poverty (Sileika and Bekeryte, 2013; Udeh, Okoroafor and Ihezie, 2013; Okorie and Anowor, 2017). The seeming link between poverty and unemployment shows how each variable affects the other since countries recording high unemployment rates especially in the double digit are bedevilled with high rates of poverty (Egunjobi, 2014).

Scholars have identified that issues of poverty and unemployment (which has been seen to take an increasing dimension in form of youth unemployment) pose threats to the peace, stability and development of nations in different dimensions and this calls for concerted efforts to manage and address them (Egunjobi, 2014; Nwagwu, 2014; Omoju and Terfa, 2014; Olotu, Salami and Akeremale, 2015; Usman, 2015; Okorie and Anowor, 2017). Okafor (2011:362) asserts that "unemployment has attendant social, economic, political and psychological consequences". Jiboku and Jiboku (2019) associated poverty, with its trend of unemployment to electoral violence and democratic failures. The effects are bad governance, bribery and corruption, political and social instability. Poverty and unemployment negatively affect security and national economic development. For instance, these problems have been associated with the Boko Haram crisis in Nigeria and other ethno-religious conflicts involving a large number of youths (Udeh, Okoroafor and Ihezie, 2013; Ighodalo, 2012; Onapajo and Uzodike, 2017; Evans and Kelikume, 2019; Elem, 2020). Poverty and unemployment have also been connected to negative social vices such as prostitution (Alobo and Ndifon, 2014), crime (Sileika and Bekeryte, 2013) including "rape, kidnapping, murder, burglary, fraud, terrorism, robbery, cyber-crimes, bribery and corruption, money laundering and so on" (Oguntunde, Ojo, Akagbue and Oguntunde, 2018:1242).

A recurring cause of poverty and unemployment in literature (apart from other reasons provided), is the lack of relevant skills and scholars have advanced skills acquisition and entrepreneurship as measures to empower individuals and address these challenges (Ahmed Rufai, 2012; Akande, 2014; Egunjobi, 2014; Jiboku and Jiboku, 2019; Rufai, 2020). The issue of skills development needs to be given priority attention not only because of the centrality of skills in development discourses but also the demands and challenges which a fast globalising world presents to all nations and their peoples. This issue is further expatiated with the Human Capital Theory in the next section in this article.

## 2.2 Human Capital Theory

The fundamental role of human capital for socio-economic transformation is well espoused in the literature (Becker, 1964; Schultz, 1961; Ogunade, 2011; Keita, 2016). Conceptually, the foundation of human capital is based on knowledge and skills acquired by an individual through education, vocational training or other learning activities (Kwon, 2009). Human capital implies investments that are made in people or that people make in themselves to improve their creative potentials or skills, empower themselves in the labour market and by extension increase productivity (Asaju, Kajang and Anyio, 2013; World Economic Forum, 2016). In effect, training and capacity building measures invested in people (employees) for better productivity are all embodiments of human capital. Frank and Bernanke (2007:355) explain that human capital is "an amalgam of factors such as education, experience, training, intelligence, energy, work habits, trustworthiness, and initiative that affect the value of a worker's marginal product".

The concept of human capital has been used by scholars in different ways and is subject to diverse interpretations and applications. However, the focus in this paper is on Gary S. Becker's perspective. Becker's (1964, 1975, 1993) work titled: "*Human Capital: A Theoretical and Empirical Analysis with Special References to Education*" analysed the concept of human capital within the context of the labour market and viewed employees to be of prime importance in wealth creation, economic prosperity and the survival of society. Arguing from the same perspective and emphasising the core importance of human capital, Schultz (1961:3) stated that

to discuss social and economic growth and development outside the concept of human capital would be as paradoxical as to discuss the former Soviet Union without the doctrine of Karl Marx. Human capital is similar to what Marx (1890) referred to as the infrastructure of society upon which the other superstructures rest (see, Woods, 2013). It serves as the foundation for societal transformation. Schultz (1961:1) observes that even though it is obvious that people acquire useful skills and knowledge, many are not conscious that these skills and knowledge are a form of capital. He emphasised that this capital is a substantial part of a product of deliberate investment that has helped the growth of Western societies at a much faster rate than conventional (non-human) capital, and that its growth may well be the most distinguishing feature of the Western economic system (see also Porter, 1990; Perepelkin, Perepelkina and Morozova, 2016). For developing countries, therefore, Schultz (1961), Kwon (2009), Gyang (2011), Rufai (2020) and other scholars advocate investment in human capital as a way of enhancing the quality of human efforts for improvement in productivity.

Both Becker (1964) and Schultz (1961) agree that investments in education, training and skills developments generate externalities for firms and they conclude that such investments remain the most distinguishing feature of the modern economic system. Without training and improvement in skills, there would only be manual work and many, except for those who have inherited property, would be poor. As Schultz (1961:16) asserts, "the man without skills and knowledge is leaning terrifically against nothing". Becker (1964:30-31) notes also that many workers increase their productivity by learning new skills and perfecting old ones while on the job. On-the-job Training, therefore, is a process that raises future productivity. Skills acquisition is another form of job security, and Becker (1964:31-40) observed that employees with specific training have less incentive to quit, and firms have less incentive to retrench them than employees without specific skills or general training, which implies that quit and layoff rates are directly related to the level of training and skills acquired.

In essence, the acquisition of skills has multiplier effects on the employees who have been trained to improve their efficiency on the job. On the flip side, lack of skills portends grave consequences for the society (African Union Commission, Directorate of Information and Communication, 2017). For instance, this arguably, accounts for poverty, unemployment and associated criminal activities in the Nigerian society such as the Niger Delta. The Boko Haram Terrorism ravaging the North East of the country that is accredited to be the poorest region in Nigeria, could also be the aftermath of lack of skills, unemployment and poverty. Development of skills especially of the youth might be a sustainable approach to a lasting peace necessary for development in Nigeria (Ladipo, Akhuemonkan and Raimi, 2013; Ayonmike, Okwelle and Okeke, 2015; Ezenwafor, 2015; Okoye and Arimonu, 2016). Human capital is seen by Ghalandarzehi and Safdarie (2012:164) as a prerequisite for development because the extent of growth and rate of development depends on the quality and quantity of an efficient workforce. Human capital provides a springboard for change and improvement, optimises the use of physical and tangible capital, increases the efficiency of production, and accelerates the rate of economic growth (Ghalandarzehi and Safdarie, 2012; Agabi and Ogah, 2010; Olaniyan and Okemakinde, 2008). The Human Capital Theory is useful because of its strength in analysing the importance of training and skills development in the socio-economic transformation of any country. In this paper, human capital theory is used as an analytical tool for understanding Nigeria's skills situation as well as advancing the repositioning of TVET in efforts of the government to address the skills challenge.

## 3. Data and Methods

### 3.1 Data description

This is a theoretical paper and based on desk research. Secondary data were used in analysing scholarly arguments on the following discourses: Education; Skills development through TVET; Challenges and potentials of TVET for achieving socio-economic development and technological transformation with particular reference to Nigeria. Data were obtained from relevant texts; journal articles; conference, workshop and seminar reports and institutional lectures. Secondary data obtainable from reliable internet sources were also used. Secondary data are compiled data that are now easily accessible for research purposes. It is an acceptable approach to undertake the use of secondary data in social research and this type of data allows for flexibility in utilisation. However, systematic procedure and evaluation must be guided (Johnston, 2014). The authors ensured the currency of information employed in this paper by selecting journal articles, books chapters and institutional documents up to the year 2020. In addition, data incorporated in this paper were those of scholars from developed and developing countries who have written and published their works on credible national and international journals. The journal articles and book chapters are those of high repute scholars, mostly academics who are experts in their different Institutions. These scholars are experienced and have contributed extensively on issues of education, skills, skills development and training, human capital formation and development, among others. They have also facilitated various national and international conferences, workshops and seminars and have promoted scholarship in their areas of expertise across various parts of the world.

In addition, the institutional documents (both national and international) from which data were extracted were those of the United Nations, World Bank, African Union Commission, International Labour Organisation, National Bureau of Statistics, and Organisation for Economic Cooperation and Development (OECD). These Institutions have, over the years, been concerned with skills development and human capital development issues and challenges and have contributed immensely to chatting way forward for improvement in different countries.

### 3.2 Data analysis Tool

The paper undertook a thematic discourse analysis. Its approach was descriptive and analytical. Discourse analysis is a "methodology for analysing social phenomenon that is qualitative, interpretive and constructionist" (Hardy et al. 2004:19). The interest in undertaking discourse analysis is exploring social reality and, in doing so, focusing on the relation between text and context. It enabled the researchers to connect the issues examined in this paper with previous discourses. Also, data collected from various sources were subjected to expansive and extensive reviews with the use of content analysis as a veritable tool of data analysis adopted in many studies based on the qualitative research methodology. Content analysis, according to Hsieh and Shannon (2005), is "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns".

## 4. Data Analysis and Discussion

### 4.1 TVET as a Strategy for Skills Development

The enormous contribution of education to the collective development and well-being of individuals and nations is well documented. Studies suggest that education is the key that

unlocks individual and group potentials. It opens up individuals' thinking faculties, transforms individuals and, by extension, the society (Odukoya, Bowale and Okunlola, 2018; Faiz, 2019). Education creates an avenue for every child to reach its potential to lead a productive, healthy life and to acquire a decent job (OECD, 2012b). According to Bloom (2014:60), "education also promotes the ability to learn new skills and adapt to new circumstances, the need for which is heightened in a rapidly changing world."

This paper emphasizes Technical Vocational Education and Training (TVET). According to the United Nations, Human Rights Office of the High Commissioner (2001) Revised Recommendation concerning Technical and Vocational Education (2001), "technical and vocational education is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life". Technical and vocational education according to this international organization is further understood to be:

(a) "An integral part of general education;
(b) A means of preparing for occupational fields and for effective participation in the world of work;
(c) An aspect of lifelong learning and a preparation for responsible citizenship;
(d) An instrument for promoting environmentally sound sustainable development;
(e) A method of facilitating poverty alleviation".

Technical Vocational Education and Training is a special form of education and training because it combines the following: technical education, vocational education, vocational training, on-the-job training, and apprenticeship training or any of the combination of these forms (Tripney and Hombrados, 2013). Despite the combination of the terms - technical and vocational education, they are different in form and content. Vocational Education (VE) as the name implies denotes skill based programs which are intended for the acquisition of skills at lower level of education and focuses on exact vocations for entry into defined workplace (Okoye and Arimonu, 2016). It is considered suitable for the following professions: automobile mechanics, plumbers, electricians and other similar vocations (Cong and Wang, 2012). On the other hand, Technical Education (TE) is a training that facilitates acquisition of practical skills, applied technical skills and basic scientific knowledge that would empower students for workplace/industry after graduation (Ladipo, Akhuemonkan and Raimi, 2013; Okoye and Arimonu, 2016). Technical education, Okoye and Arimonu (2016:113) observe, contributes to fields ranging from electrical and electronics technology, metal work technology, mechanical/automobile technology, building technology, woodwork technology, and others. The Nigerian revised National Policy on Education looks at technical vocational education as that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge relevant for survival especially in this new age of technological advancement (Federal Republic of Nigeria, 2004).

The aim of TVET is to encourage what Cong and Wang (2012:68) describe as "application-oriented talents that have related technical theoretical knowledge and practical ability". Nwogu and Nwanoruo (2011), Egbri and Chukwuedo (2013), Ladipo, Akhuemonkan and Raimi (2013); Ayonmike, Okwelle and Okeke (2015); Ezenwafor (2015), Okorafor and Nnajiofo (2017); Oladejo (2019) and other scholars in their different studies have identified that TVET is that form of education that leads to development of practical skills. Those who acquire such skills would not find it difficult to be gainfully employed in a chosen occupation. TVET will make an individual to become self-reliant and hence contribute to overall national development (Federal Republic of Nigeria, 2009). Okoye and Okwelle (2013:134) emphasize that:

*TVET is the form of education that advocates development of the head (knowledge), training of the hand (dexterity) and enriching the heart (consciousness and painstaking) – the 3Hs. TVET is a total deviation from the previous emphasis on 3Rs – reading, writing and arithmetic, which was fundamentally a form of credentialising entry into elite status with its graduates/products roaming about seeking for the non-existing white-collar jobs.*

The UNESCO-UNEVOC (2006:11) has emphasized that the impact of technology as well as the transformation of different sectors such as agriculture, fishing, forestry, industry, mining and even the service sectors into knowledge based sectors in most developed countries is a pointer that those who would operate in these sectors need targeted education and training to be able to operate computer-controlled equipment. Thus, with the demand for more skills as a result of technological revolution and the challenges posed by a knowledge and information-based economy, there is an increasing demand for skilled labor. These factors are also responsible for the disparities of wages of skilled and unskilled labor (Cong and Wang, 2012). Some of the consequences of this situation are the skills-gap scenario, skills shortages and skills mismatches experienced in the world of work (International Labor Organization, 2019b). This is particularly the scenario in many African countries (African Union Commission, Directorate of information and Communication, 2017). Okoye and Arimonu (2016:114) point out for instance, that "in Nigeria, the too much emphasis on university education has always reduced the economic opportunities of those who are more work oriented than academics". This again directs our attention to the issue of TVET which many scholars and analysts agree has not been accorded the priority attention it deserves in Nigeria (Yusuf and Soyemi, 2012; Ladipo, Akhuemonkan and Raimi, 2013; Ezenwafor, 2015; Okoye and Arimonu, 2016; Okorafor and Nnajiofo, 2017). These scholars are among those who argue that while several empirical studies have established a positive nexus between human capital and national development through specialized education like TVET, in Nigeria, this form of education and training is confronted with a lot of problems.

## *4.2 TVET Approach for Socio-Economic Growth and Development*

Technical Vocational Education and Training (TVET) is widely recognized as a vital strategy for the socio-economic growth and technological development of nations (Yusuf and Soyemi, 2012; Ladipo, Akhuemonkhan and Raimi, 2013; Tripney and Hombrados, 2013; Ayonmike, Okwelle and Okeke, 2015; Ezenwafor, 2015; Ogbunaya and Udoudo, 2015). This is evidenced by the experiences of developed countries of the West, as well as East and South-East Asia, Russia, India and China (Ladipo, Akhuemonkhan and Raimi, 2013; Cong and Wang, 2012). The wide acceptance of the usefulness and impact of TVET is also portrayed by its prominence on developmental agenda of different nations (both developed and developing) and its inclusion as a topical issue at Conferences, Think-tanks and Workshops organized to deliberate on issues about development both at national, regional and global levels in recent times. In particular, the needs, demands and challenges of a progressing globalization era have made TVET a matter of urgency for nations, and have heightened the imperative of human capital formation as an economic imperative (Cong and Wang, 2012). There are several factors responsible for this development. For instance, the UNESCO-UNEVOC (2006:10) assert that the labor market is undergoing the transformation from the industrial age to the information age. With this trend, there would not only be job shift, but also the need for retraining and dislocation of workers. Hence, a worker who hopes to maintain his/her skill and competencies in the labor market and

sustain his/her employment needs more training to update skills. Again, Cong and Wang (2012:67) draw attention to the competition in economic markets which has become more intense in a rapidly globalizing world. This phenomenon pushes the demand for expertise and high-quality workforce in various fields of the whole society making new round of development of vocational education imperative. UNESCO (2016:7) asserts that TVET can improve responsiveness to changing skill demands by companies and communities; it can increase productivity and increase wage levels.

There is a growing literature on the vital role of education and skills development through specialized education like TVET in promoting economic growth and development of nations (Yusuff and Soyemi, 2012; Ladipo, Akhuemonkan and Raimi, 2013; Maclean et al, 2013; Ayonmike, Okwelle and Okeke, 2015; Okorafor and Nnajiofo, 2017). Yusuf and Soyemi (2012), Tripney and Hombrados (2013), Ogbunaya and Udoudo (2015) and others emphasize that TVET has been recognized by governments of different countries as a tool for empowering people with practical job skills especially the youth not only to enable them explore different job opportunities but also for them to be self-employed and in turn contribute to national socio-economic development. In addition, UNESCO (2016:7) identify that "in ensuring that skills gained are recognized and certified, TVET can also offer skills development opportunities for low-skilled people who are under or unemployed out-of-school youth and individuals not in education, employment and training (NEETs)". Following these perspectives, TVET plays a critical role in ensuring peace and social stability in nations as it will assist in mitigating the negative socio-political and economic consequences of increasing levels of unemployment and poverty. As such, governments and policy makers in different countries are carrying out different reforms in their educational sectors in order to enhance TVET. Hollander and Mar (2009:4) cautions, however, that it may be difficult to explore these potentials of TVET if for instance, there is no labor market to absorb TVET graduates and provide them with decent work.

Instructively, the World Bank (2018) identified that "over the last two decades, sub-Saharan African countries experienced significant growth as a result of the rapid transformations and foreign investments which helped boost the demand for greater technological skills". This demand is yet to be met as the World Bank noted that there is large gap in the demand and supply of technical and vocational skills in these countries and that the shortage of an adequately educated workforce identified by industries is a major obstacle to further growth and development. This is the scenario in Nigeria. Despite the country's enormous natural and material resources which could be explored for economic development, Nigeria is still struggling with achieving development objectives and continues to grapple with increasing levels of poverty with its attendant tendencies of unemployment and illiteracy. The country also has a large number of out of school children and adults with limited or no skills (World Bank, 2015; Industrial Training Fund/UNIDO, 2016). These negative trends have been associated with different internal political conflicts and social instability experienced in the country. With a large number of universities (Federal, State as well as Private) and other skills development institutions established in Nigeria to produce adequate manpower for the country, skills shortages and mismatches abound in the industrial and service sectors and over 60 per cent of the labor force is classified as unskilled and untrained (Ahmed Rufai, 2012). This is as a result of the kind of education that have been passed on in the different classrooms apart from the technical knowledge and practical skills required in the world of work.

Different scholars observe with concern the problems confronting the educational sector and other skills development institutions particularly, with regards to TVET in Nigeria which have led to failure of graduates to secure employment amidst other challenges (Yusuf and Soyemi, 2012; Egbri and Chukwuedo, 2013; Ayonmike, Okwelle and Okeke, 2015; Akanbi,

2017). These problems are pointers that Nigeria is yet to benefit from the potentials of TVET and reveal further particular missing-links in Nigeria's education and skills development agenda which are unpacked in this paper.

### 4.3 TVET: The Experience of Nigeria

Nigeria, like most nations of the world has acknowledged the role of TVET in enhancing technological transformation and sustainable development (Ezenwafor, 2015; Akanbi, 2017; Okorafor and Nnajiofo, 2017). This is demonstrated by the good intentions of successive Nigerian governments in putting in place policy and institutional frameworks to ensure skills development through TVET. However, scholars, policy analysts, some national and international agencies which handle issues related to TVET observe that the country is yet to reap the potentials of TVET with increasing records of illiteracy, unemployment and poverty (World Bank, 2018; UNESCO-UNEVOC, 2019, African Union Commission Directorate of Information and Communication, 2017).

Nwogu and Nwanoruo (2011), Yusuff and Soyemi (2012) and Okorafor and Nnajiofo (2017) and others state that vocational technical education is a very important aspect of the Nigeria's formal educational system under the 6-3-3-4 program. At post-secondary/tertiary levels, technical and vocational colleges, polytechnics, monotechnics and universities have been the institutional structures established to enhance the country's technical growth and development (Yusuff and Soyemi, 2012). Accordingly, the Federal Republic of Nigeria Report of the Vision 2020 National Technical Working Group on Education (2009), highlight that formal vocational education starts after Basic Education with three years of Technical Colleges or more recently, the Vocational Enterprises Institutions (VEIs), while the majority is found in non-formal training obtainable in Craft Vocational Schools, Skills Development Centers, as well as open Apprenticeship Workshops spread across the country. In Nigeria's educational system, the quality assurance agencies for TVET include the National University Commission (NUC), and National Board for Technical Education (NBTE), National Business and Technical Education Board (NABTEC). While the NUC's roles include the accreditation, monitoring and evaluation of universities programs, infrastructural facilities, teaching and non-teaching staff, and instructional materials, the NBTE performs similar task as that of NUC to polytechnics, technical colleges, and other certificate awarding TVET providers (Ayonmike, Okwelle and Okeke, 2015).

Notwithstanding, while studies have dwelt extensively on the socio-economic development and technological progress achieved by nations through TVET, some scholarly work have focused on the experience of developing African countries like Nigeria (which possess enormous natural and material resources) in promoting TVET in a fast globalizing technologically driven world. As such, Ahmed Rufai (2012), Egbri and Chukwuedo (2013), Ladipo, Akhuemonkan and Raimi (2013:16), Okoye and Arimonu (2016), Odukoya, Bowale and Okunlola (2018) and others assert that despite the relevance of TVET in Nigeria, this form of education, although embedded in the country's education policy, is yet to receive the prioritization which it deserves. In essence, TVET in Nigeria is confronted with different social, political and operational challenges (Okorafor and Nnajiofo, 2017; Odukoya, Bowale and Okunlola, 2018). Ladipo, Akhuemonkan and Raimi (2013) and Yusuf and Soyemi (2012) note that the first challenge affecting TVET is the poor perception of TVET by parents and wards. Several individuals view vocational education as a special education intended for drop-outs and less intelligent learners/people.

Ahmed Rufai (2012), Egbri and Chukwuedo (2013) and Ladipo, Akhuemonkan and Raimi (2013) identify problems of ill-equipped laboratories/workshop, inadequate tools and equipment and gross infrastructural deficiencies in technical colleges and Vocational Enterprise

Institutions (VEIs) culminating in poor skill acquisition. These have affected the actual functioning of skills development institutions and have also limited the learners' capacities in acquiring practical skills required for securing employment. Furthermore, Ahmed Rufai (2012), Ladipo, Akhuemonkan and Raimi (2013) and Okoye and Arimonu (2016) state that the problems affecting TVET in Nigeria range from development of policies which are not tailored or in line with the country's needs and challenges; in essence, the design of curricula that are not targeted towards realistically addressing the mismatch between training and labor market skill demand and problem of effective curriculum implementation. There is also the issue of embezzlement of fund meant for educational development purposes, lack of teacher motivation, poor funding, brain drain, poor staff training, leadership problem and bribery and corruption (Okoroma, 2006; Ahmed Rufai, 2012; Ladipo, Akhuemonkan and Raimi 2013; and Okoye and Arimonu, 2016).

Scholars lament the lack of follow-up and continuity of government policies in Nigeria and frequent change of government as part of the critical challenges facing the education sector in Nigeria (Okoroma, 2006; Ahmed Rufai, 2012; Nwogu and Nwanoruo, 2011). For instance, Odukoya, Bowale and Okunlola (2018:3) observe that the Nigerian government came up with the 9-3-4 system of education while the 6-3-3-4 system was not fully implemented. Ladipo, Akhuemonkan and Raimi (2013:19) state pointedly that at a point in time, technology education (TE) was separated from science education (SE). Then, sudden policy reversal led to a merger of TE and SE as Science and Technology Education (STE). The implication of embedding TVET under science education is believed to have undermined TVET subject vocations. Ayonmike, Okwelle and Okeke (2015) and Ezenwafor (2015) observe the acute shortage of competent TVET teachers/instructors; Ahmed Rufai (2012) and Nwogu and Nwanoruo (2011) note the issue of poor remuneration of vocational technical teachers while Yusuff and Soyemi (2012) decried poor supervision, monitoring and evaluation of TVET programs. In addition to these problems, Ahmed Rufai (2012), Yusuff and Soyemi (2012) and Odukoya, Bowale and Okunlola (2018) point to the ceiling on career progression of polytechnic staff, discrimination against graduates of technical schools and low enrolment at all levels of technical education. In addition, the pervasive nature of non-formal TVET in Nigeria which is the system of training of young boys and girls by self-employed artisans and technicians has been brought to the fore (Yusuf and Soyemi, 2012). For Ogbunaya and Udoudo (2015:143), TVET programs in Nigeria are ineffective and of very low quality.

## 5. Conclusion

The paper examined poverty and unemployment as salient issues that negatively affect the peace, stability and development of Nigeria. It argued that the rising rate of poverty and employment, particularly among the youth portend great danger for the Nigerian polity and furthered the position that Technical Vocational Education and Training (TVET) should be repositioned and strengthened as part of focused policies and concerted efforts aimed at redressing the rising trend.

The authors observed from empirical literature that technical and vocational skills are critical for development and technological advancement of nations and that skills generally contribute to national economies. Notwithstanding, TVET appears not to have been accorded priority attention in Nigeria. While the paper stressed that successive Nigerian governments have put in place policy and institutional frameworks to achieve national aspirations of education and skills development through TVET, this form of education is confronted with multifaceted problems. Importantly, the challenges facing TVET constitute missing-links in Nigeria's skills development agenda. The problems explain why the country is yet to benefit

fully from the deliverables of TVET and reflected in rising levels of illiteracy, unemployment, poverty, internal conflicts, political and social instability, among other problems.

The conclusion in this article is that Nigeria cannot afford to continue to neglect TVET and hope to make progress in reducing poverty and unemployment. Thus, there is the need for concerted actions aimed at improving the education sector generally and re-aligning missing-links in Nigeria's technical and vocational skills development agenda.

## 6. Recommendations

### 6.1 Sincere commitment to the implementation of policies

Nigeria is not lacking in policy; the problem lies in the area of implementation. Different policies formulated by successive governments aimed at reducing the hardships as a result of conditions of poverty and unemployment included: Accelerated Food Production Programs, Nigerian Agricultural and Cooperative Bank, Operation Feed the Nation (OFN), Green Revolution, Agricultural Development Project (ADP), National Directorate of Employment (NDE), National Economic Reconstruction Fund (NERFUND) and National Poverty Eradication Program (NAPEP). These alleviation methods were set up in succession in order to take care of lapses and inadequacies of their predecessors. Since the return to democratic rule in May 1999, efforts of government has been made to reposition the Nigerian economy by implementing economic reforms and sound economic policies. The government has made efforts to restructure state enterprises; it introduced and implemented several reforms in different sectors of the economy; it put in place legislative, policy and institutional frameworks to rebuild the economy and ensure sound financial management. Measures to combat corruption and money laundering were also put in place (AU/APRM, 2009:142-149; Edo and Ikelegbe, 2014). President Olusegun Obasanjo's National Empowerment and Economic Strategy (NEEDS) initiative was meant to promote reforms. His successor, President Umaru Musa Yar'Adua, introduced the Seven-Point agenda for Nigeria's development. President Goodluck Ebele Jonathan came up with his policy package tagged the Transformation Agenda which gave the people a lot of promises (Uche, 2019).

In the same dimension, the current Administration is also not taking the issue of poverty alleviation with levity, as existing measures on poverty reduction are being remodeled with more financial vigour under the National Social Investment Programmes (NSIP) such as the N-Power programmes (Federal Republic of Nigeria, 2016). Therefore, the relevant policies aimed at poverty and unemployment reduction and those on technical vocational skills development need to be revisited and implemented with pragmatism as a way of filling the existing gaps in skills development. The governments at all levels need to be actively involved in improving TVET. There is need for adequate funding, supervision and coordination of the policies and programmes of the country's skills development institutions and stakeholders. While the efforts of the Federal Ministry of Trade and Investment through the Industrial Training Fund (ITF) is commendable, more Industrial Skills Centres of ITF need to be established in different parts of the country to focus on training of adults with tertiary educational qualifications.

### 6.2 Improved funding for the education sector and TVET

The Nigerian government should properly fund the education sector in line with the guidelines provided by UNESCO. Importantly, more funding is required to adequately equip the Technical Colleges to enable them to have state of arts equipment and facilities for training in line with the technology of the twenty-first century. The reality that stares Nigeria in the face is to urgently reform its education sector and revive its skills centers and TVET in line with global needs in order to develop the human capital that will be instrumental in developing local technology and promoting socio-economic development.

### 6.3. Addressing issues of corruption and misappropriation of funds

Tackling head on the issues of corruption and misappropriation of funds by the political leadership is important. These problems have continuously hindered Nigeria's socio-economic development. The funds which are improperly diverted by the state could properly be invested into priority areas such as education and skills development, improving infrastructures, among other legitimate areas.

### 6.4 Increased enlightenment and sensitization

There is need for reorientation of Nigerians to view technical vocational skills education and training as important and not for the less brilliant. As it is presently, technical schools are unattractive to many especially the literate ones in the Nigerian society. For the young ones who are just leaving secondary school, they need to be encouraged to go to Technical Colleges for acquisition of technical vocational skills to reduce the number of youths that roam about the streets who could be lured into engaging in unwholesome activities. Youth restiveness in different parts of the country would be arrested with TVET. The issue of the 'Almangiri' youth in the North with very little hope for the future will be turned around and the insurgency ravaging the North East of the country would have been stopped because a skilled individual will not be easily lured into the Boko Haram sect to boost their ranks and file in the insurgency.

### 6.5 Incorporating and formalizing the informal apprenticeship system for training

The informal apprenticeship system for training in different vocations could be incorporated and formalized for training of the youth to make them relevant in different vocations. This will require enactment of policy frameworks at the different levels of government, and with appropriate regulatory framework, a lot of revenue will accrue to the different tiers of government and reliance on craftsmen from neighboring countries would have been halted for national good.

Developing skills of the large population of the youth does not necessarily have to be limited to the formal educational levels. While formal education and training may be important, considering Nigeria's historical and colonial experiences, emphasizing formal educational setting based on attainment of specific academic level for training and skills development might exclude a substantial proportion of the Nigerian youth. Many of the youth in rural areas, townships and cities (for no fault of theirs but the socio-political and economic conditions in which they found themselves) are deprived of basic formal education (Jiboku, 2016; see also, Baah-Boateng, 2013). Therefore, training and skills development programs should emphasize employment generation, empowerment, and job creation. It should be realized that the government cannot provide jobs for all its citizens. In this respect, the informal apprenticeship skills development program needs to be revived and strengthened for the training of technicians and artisans to complement government efforts through the formal training institution.

### 6.7 Suggestions for Future Research

As this paper has shown, TVET is a viable strategy for Nigeria to achieve much needed sustainable development. There is therefore need for more studies to address persisting challenges in Nigeria's educational sector and skills development institutions. More scholarly attention and research could concentrate on coordination and harmonization of functions, policies and programs of the Nigerian government with those of other skills development institutions including the multinational corporations which claim to be involved in skills

development of their employees. The role of government institutions in monitoring and supervision of skills development programmes in the state needs to be explored.

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# THE "TORRE DEL CERRANO" MARINE PROTECTED AREA AND THE EUROPEAN CHARTER FOR SUSTAINABLE TOURISM IN PROTECTED AREAS AS AN ECOTOURISM MANAGEMENT TOOL

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## Abstract

*The European Charter for Sustainable Tourism (ECST) in Protected Areas is a voluntary management tool and certification that enables protected areas to develop sustainable tourism for the benefit of the environment, local populations, businesses, and visitors. The EUROPARC Federation, of which Federparchi has been the Italian section since 2008, issues the internationally recognized Charter. The entire process is participative and integrated through a strategic approach that includes defining the strategic objectives to be pursued through an Action Plan, allocating the necessary resources, and monitoring the results achieved. This contribution aims to propose a critical analysis of the documentation produced by the managers of the Torre del Cerrano Marine Protected Areas (in Italy) following the process implemented during the months when the Charter was renewed (between autumn 2018 and spring 2019) and contained in the Strategy and Action Plan document. The author conducted a critical analysis to define the factors characterizing a protected area as the result of the participatory process.*

**Keywords**: Sustainable Tourism; Sustainable Development; Ecotourism Management, Certification, Marine Protected Area, SWOT analysis.

## 1. Introduction

Sustainable tourism is defined by the United Nations World Tourism Organization (UNWTO) as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities" (UNWTO and UNEP, 2005, p. 12). Within this broad concept, ecotourism is defined as a type of sustainable tourism aimed at improving natural resource conservation and increasing environmental education.

According to several influential organizations, ecotourism can also provide socio-economic benefits. According to the United Nations (2012), ecotourism has the potential to increase income and job creation while "encouraging local and indigenous communities in host countries and tourists alike to preserve and respect the natural and cultural heritage" (Das and Chatterjee, 2015. p. 2). To that end, an effective ecotourism strategy necessitates the participation of numerous stakeholders, including resource managers, policymakers, communities, and tourists themselves.

Protected areas (PAs) are recognised as the world's most effective mechanism for nature conservation and represent a key market for nature-seeking tourists (Surendran and Sekhar. 2011); for these reasons, they provide a suitable context for the development of ecotourism. PAs have become the central actors in different contexts within the ecotourism phenomenon and, at the same time, the role of PAs can be further strengthened when considering the socio-economic and welfare effects they can exert on local territories and the communities around them.

The stimulus provided by Agenda 21 of 1992 (UN, 1992) also encouraged some actors to strengthen their commitment to promoting the philosophy and practices of ecotourism. In particular, in 1995, the EUROPARC Federation - an association that supports the management of European PAs - established the European Charter for Sustainable Tourism in Protected Areas1 (hereinafter referred to as ECST or the Charter). This initiative would appear to offer an effective management tool to combine competitiveness, well-being, and sustainability through a set of general principles and actions, using a triple bottom line approach (i.e. economic, social, and environmental) (Elkington, 1997). To achieve such an ambition, the Charter necessitates a strategic as well as a participatory approach within it.

The Charter plays an important role in the hoped-for development of tourism in the area, which is seen as a type of local economic development that is easier to achieve. Nevertheless over time and to an increasing extent, it has highlighted certain limits linked to its negative repercussions on the balance of natural ecosystems, to the extent that a problematic relationship between tourism and the environment must be anticipated. However, in some cases, such as the establishment of Protected Nature Areas, which were established to pursue the objectives of protecting and preserving resources in geographical areas with high naturalistic value and tourist potential, this problem appears to be lacking or at least attenuated, owing to their ability to respond to the need to promote tourist activities in a sustainable manner.

The history of protected areas shows how they have been the source of complex choices, arising from the contradictory tensions between the needs of the natural world and those of the human sphere. The fundamental cultural shift to respond to these tensions occurred when parks were conceived as laboratories for a non-homologising economy that was attentive to local peculiarities, instruments for managing the territory, important and indispensable assets, suitable not only for meeting conservation objectives (which remains the main reason for their establishment), but also for experimenting with different development opportunities.

The adoption of the European Charter for Sustainable Tourism (ECST) is a significant step in this direction, as it is a methodological and certification tool (Bravi, Santos, Pagano and Murmura 2020) (Murmura and Bravi 2020). for better management of protected areas, ensuring

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[1] It is a voluntary agreement aimed at recognizing protected areas that positively meet the requirements for membership in the ECST, with the goal of promoting sustainable development and tourism management through the implementation of best practices. The development of the Charter's contents and methodology is the result of a collaboration between representatives of protected areas, the tourism industry, and their partners, led by the Federation of Regional Natural Parks of France under the aegis of the EUROPARC Federation, the pan-European non-governmental organization for the protection of Europe's protected areas, which manages the Charter with the support of the federation's national sections.

that tourism contributes to the balanced economic, social, and environmental development of Europe's protected areas. In fact, the collaboration of all interested parties to develop a common strategy and action plan for tourism development, based on an in-depth analysis of the local territorial situation, is a key component of the Charter. The goal is to protect the natural and cultural heritage of the protected area, as well as to continuously improve tourism management in the protected area for the benefit of the environment, the local population, businesses, and visitors.

Since its inception in 1995, the ECST has been involved in the development of more than 100 ecotourism areas throughout Europe.

The study sought to answer two key questions within this research framework: 1. Are strategic and participatory approaches truly critical to the effectiveness of ecotourism development? 2. How can strategic and participatory approaches to ecotourism development be effective? The paper begins with a discussion of the study's theoretical foundation.

The used methodology is then presented, and the research findings were also illustrated. Finally, conclusions, limitations, and future directions are presented.


## 2. Ecotourism Definition and Dimensions

The term "ecotourism" was coined nearly four decades ago, and it has been constantly modified and updated to the present day (Wood, 2002; Stronza. 2007). Today, ecotourism is defined as "environmentally responsible travel and visitation to relatively undisturbed natural areas in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present) that promote conservation, has low visitor impact, and provides for beneficially active socioeconomic participation of local populations" (Ceballos-Lascurain. 1996). It is worth noting how this definition emphasizes the importance of community involvement. The UNWTO defined ecotourism using the following criteria (UNWTO, 2002, pp. 4-5):
1. it includes "all nature-based forms of tourism in which the main motivation of the tourist is the observation and appreciation of nature as well as the traditional cultures that prevail in natural areas";
2. it "includes educational and interpretation features";
3. it is generally, but not always, organized for small groups by specialized tour operators (Pencarelli and Dini, 2016), with service provider partners at the destinations being small, locally owned businesses;
4. ecotourism "reduces negative impacts on the natural and socioeconomic environment";
5. ecotourism "helps to maintain natural areas that are used as ecotourism attractions by:
    ○ generating economic benefits and wellbeing for host communities, organizations and authorities managing natural areas for conservation purposes;
    ○ providing alternative employment and income opportunities for local communities;
    ○ and increasing awareness of the conservation of natural and cultural assets among both locals and tourists."

Most of the features already described in Ceballos-Lascurain's (1996) definition are clearly included in the UNWTO description of ecotourism's characteristics. It focuses on natural resources and the surrounding environment, emphasizing their role as ecotourism attractions and the importance of their conservation. Local communities are fully included in the UNWTO ecotourism perspective, as they are expected to benefit from the responsible management of the environment around them. The emphasis on educational features distinguishes this definition from previous definitions. According to the UNWTO definition, ecotourism must foster

environmental awareness, consciousness, and culture in local communities and "ecotourists2 to fully promote environmental and socioeconomic benefits.

More recently, The International Ecotourism Society defined ecotourism as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education."

Education is intended to include both staff and guests (TIES, 2015). It could be argued that natural resource conservation has remained at the heart of the definition, but other features have been condensed into a few key words. Firstly responsibility and awareness: tourists should travel responsibly to minimize their social, economic, and environmental impact; in other words, they should be aware of and respect the unique characteristics of the territory they are visiting. Secondly local people's well-being: ecotourism must provide objective benefits to local communities in and around natural areas (Kouhihabibi, 2021). Wellbeing encompasses a broader perspective in which local community development includes socioeconomic, environmental, political, and psychological aspects (Das and Chatterjee, 2015). Third, culture: ecotourism must include interpretation and education to increase visitors and hosts knowledge, awareness, and environmental consciousness. According to this viewpoint, education is meant to be inclusive, underpinning the concept of a necessary overarching process of stakeholder involvement (Ceballos-Lascurain, 1996).

## 2.1 Cultural and socio-economic dimensions

By providing more opportunities for earning a living through ecotourism-related employment, the development of ecotourism can improve both the standard of living and local business development within local communities (Ashley, 2002; Goodwin, 2002). Tourism-related job opportunities can range from tourism services to production systems.

The growth of ecotourism has the potential to increase social empowerment. Scheyvens (2000, p. 241) defines this as "...a situation in which a community's sense of cohesion and integrity has been confirmed or strengthened by an activity such as ecotourism." From an individual standpoint, ecotourism provides direct benefits. When such benefits are shared among members of a community, its sense of cohesion and integration can be strengthened. In this view, education, and awareness, both for hosts and tourists, are essential for preserving and respecting the community's traditions and cultural heritage (UNWTO, 2013). This process leads individuals and the community to gain a higher esteem and greater respect for their own culture, which in turn makes them more active and capable of becoming part of the decision-making process regarding ecotourism sites.

## 2.2 Environmental dimension

Individuals can be incentivized to protect natural resources as the direct economic benefits spread throughout the local community (Stronza, 2007; Surendran and Sekhar. 2011). Ecotourism can 'promote biodiversity conservation by providing economic benefits to communities' in this process (Das and Chatterjee, 2015, p. 5).

The development of ecotourism is based on "applying a green growth strategy in the context of tourism with the goal of sustainable use of finite natural resources" (Das and Chatterjee, 2015, p. 8). As a result, ecotourism is a viable alternative to the exploitative use of natural resources (Wood, 2002; Li, 2004: Nyuapane and Poudel, 2011). In this sense, Libosada (2009) describes ecotourism as the tangible aspect of conserva-tion, while Holden (2003) underlines its ethical dimension. He claims that Ecotourism emphasizes the importance of resource conservation while adopting a conservation-based ethic and considering the economic interests of all stakeholders (Holden, 2003).

The framework for analysing ecotourism emphasizes "a mutual interdependence between the economic and socio-cultural aspects of ecotourism and natural resource conservation" (Das and Chatterjee, 2015, p. 14). However, there are examples of ecotourism sites that have failed to meet the goals of economic and social empowerment and environmental conservation due to a lack of proper site management and a lack of environmental consciousness among tourists. In fact, "proper" management of eco-tourism sites is one of the most important factors in their success. The dynamics of the three major stakeholders: resource manager (I); (II) community; and (III) tourists are especially important for the success of an ecotourism site; thus, they must be properly managed (Das and Chatterjee, 2015). Policies, management tools, and a strategic approach are required to avoid or manage stakeholder conflicts and to ensure that all stakeholders participate in the development of ecotourism.

It could be argued that ecotourism should be founded on a solid strategic approach to consider all of the triple bottom line dimensions systemically and holistically and to harmoniously manage the stakeholders' diverse needs (Musso, 2019).

### 2.3 Ecotourism, Protected Areas and Participation

Among the factors driving the growth of the ecotourism market is the fact that tourists have become "greener" and demand "environmentally appropriate tourism experiences" (Sharpley, 2006, p. 8). Obviously, tourists only represent the demand side of the ecotourism market. On the supply side, PAs can be regarded as suitable (and in some cases, excellent) locations owing to their institutional mission. Indeed, PAs are defined globally as "clearly defined geographical spaces recognized, dedicated, and managed, through legal or other effective means, to achieve long-term conservation of nature with associated ecosystem services and cultural values" (Day et al., 2012, p. 9). The deep and strong conceptual connection between ecotourism and protected areas is clear from this PA definition.

In fact, PAs include several of the fundamental characteristics of ecotourism in their mission and function, such as:

1. They must be formally recognized by law and dedicated to specific conservation purposes.
2. To achieve their conservation goals, PAs must be properly managed, which means that all activities must aim to influence natural systems and human activities, ranging from careful environmental protection to resource sustainability (Dudley and Stolton, 2008).

PAs, like ecotourism sites, are expected to provide multifaceted benefits (Morandi et al., 2013; Kati et al., 2014; Scolozzi et al., 2014). in terms of preserving local biodiversity, preserving cultural and usual traditions, contributing to human well-being and wealth, and improving education, scientific research, recreational, and socioeconomic development activities Despite these advantages, "the designation and management of PAs is not always without conflict." The approval and participation of local stakeholders has been identified as critical for the long-term success of protected area management (Kati et al., 2014, p. 2).

Warner (1997) was the first to recognize the importance of combining institutional and citizen participation in the pursuit of "sustainable orientation." This collaboration is also required to propose a generalized model of participation based on consensus building, as well as to prevent or resolve conflict between stakeholders who may be impacted by sustainability-oriented decision making. In this regard, Tomićević, et al. (2010, p. 1) emphasized the importance of implementing the participatory approach to promote the sustainable use of natural resources. whereas Reed (2008) discovered evidence that stakeholder involvement can "improve the quality of environmental decisions."

Participation in the management of PAs and ecotourism sites is the subject of several significant European case studies. A discriminant analysis survey of regional parks in the Slovenian Alps found that the more importance given to the factors that influence local populations' perceptions, the more significant their involvement in the process of creating, planning, and managing the protected area will be (Nastran and Istenic, 2015).

Bouamrane et al. (2016) highlighted some cases in France and Africa involving biosphere reserves that allow for continuous interaction between society and the environment and necessitate a process of active participation of various stakeholders who interact together to develop a unified proposal or a common purpose (in terms of vision, goals and actions).

## 3. The European Charter for Sustainable Tourism in Protected Areas

The definition of the ECST certification procedures is mainly based on the recommendations of the study "Loving Them to Death? Sustainable Tourism in Europe's Nature and National Parks" (EUROPARC, 1993) and the priorities contained in the recommendations of Agenda 21 and the Sixth Community Environment Action Programme entitled Environment 2010: Our Future, Our Choice. In addition, the IUCN Parks for Life action programme (1994) identifies ECST itself as one of the priorities for European parks.

ECST has taken on board the principles of the Convention on Biological Diversity's International Sustainable Tourism Guidelines, providing a practical tool for their implementation in protected areas at a local level (Federparchi, 2021).[2]

The central element of the Charter is the collaboration with all stakeholders to develop a common sustainable tourism strategy and an action plan based on a thorough analysis of the local situation.

The Charter promotes five principles, which define and recognise good practice in the development and management of sustainable tourism in Europe's most precious landscapes.

The principles should inspire the promotion and the management of Sustainable Tourism in Protected Areas:

1. Giving priority to protection. A fundamental priority for the development and the management of sustainable tourism should be to protect the area's natural and cultural heritage and to enhance awareness, understanding and appreciation of it.
3. Contributing to sustainable development. Sustainable Tourism should follow the principles of sustainable development which means addressing all aspects of its environmental, social, and economic impact in the short and long term.
4. Engaging all stakeholders. All those affected by sustainable tourism should be able to participate in decisions about its development and management, and partnership working should be encouraged.
5. Planning sustainable tourism effectively. Sustainable Tourism development and management should be guided by a well-researched plan that sets out agreed objectives and actions.
6. Pursing continuous improvement. Tourism development and management should deliver ongoing improvement in sustainable environmental impacts, visitor satisfaction, economic performance, local prosperity and quality of life, requiring regular monitoring and reporting of progress and results.

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[2] Protected areas that have received the Charter may then choose to implement STEPS II and III (agreements and specific action plans with individual enterprises and tour operators that have actively participated in Step I).

It seems clear that the choice of these principles was induced by the desire to lead the actors of the protected areas to a correct management of those areas, with the intention of combining the natural values to be preserved and the anthropic actions with those of sustainability, avoiding the so-called and undesirable "museification" of the area subject to environmental protection through the joint and coordinated action of the various actors involved.3

Therefore, a collaborative program between ECST, as a mutual commitment between protected area managers and each enterprise, will result in many mutual benefits. In fact, ECST aims at cooperation between all stakeholders involved in the development and management of tourism activities and at avoiding that protected area managers act in isolation. Therefore, ECST stakeholders choose to adopt working methods based on collaboration, which will be substantiated at each stage of implementation, encouraging the sharing of responsibilities, and emphasizing the individual and joint commitments of protected area managers and other stakeholders. Consequently, a cyclical monitoring of the management results obtained in the area appears necessary to evaluate the contribution of changes to the planned processes that may be necessary to achieve the predefined objectives.

The European Charter for Sustainable Tourism in Protected Areas is a practical management tool (EUROPARC, 2021) that enables protected areas, their communities, and businesses to work together for sustainable tourism development.

In this way, sustainability underpins the tourism sector in the area. Therefore, the process outlined in the Charter has 3 elements to enable companies, local businesses, and tour operators to share a common vision and objectives for the protected area they cover:

- Part I: Sustainable Destinations
  - The first part, the main one, addresses Sustainable Destinations, with reference to the geographical contexts in which a protected area falls. The Charter is assigned to the managing body of the protected area and covers a precise area of application of the Charter, which can be wider than the legally defined protected area.
- Part II: Sustainable Partners
  - The second part is addressed to local companies operating in sustainable tourism activities within the Charter area.
- Part III: Sustainable Tour Operators
  - Part III is specific to tour operators and travel agencies that bring visitors to protected areas and wish to contribute to the sustainable development of the Charter area.

### 3.1 ECST in Italy

In just a few years, ECST has become very important in Italy and it is now considered as a very useful tool for the governance of protected areas by parks, regions, and the Ministry of the Environment. Many factors have made this success possible. At the same time, there are some critical elements that will be important to consider for the future.

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3 The actors are interested in the effects of proper management, which can have a positive induced effect on the areas in which they operate. "have multiple entities the resident population that, through the creation of a micro-entrepreneurship in tune with sustainable development policies, can enhance the territorial richness such as crops and typical products; public bodies such as the Park Authority that, through the Park Plan, manages the protected area in terms of fishing, hunting, tourism; administrations such as town or city councils that deal with natural resources within their mandate; industries such as tourism operators and water users; non-governmental organizations, research institutes and universities for whom the protected area is at the centre of their professional interests" (Quattrone, 2003, p. 95).

At the end of the 1990s, the Parco Regionale delle Alpi Marittime chose to be one of the seven pilot areas to test the European Charter for Sustainable Tourism promoted by the Europarc Federation. Thus, in 2001 it became the first ECST park in Italy and one of the first four in Europe. The Sibillini National Park and the Adamello Brenta Nature Park followed shortly afterwards. A few years later, Lombardy was the first region to decide to support and finance the candidature of four protected areas in its territory.

An important change took place in 2008: Federparchi and Europarc Italia, until then two separate bodies, merged to create a single association, which chose ECST as one of its priorities. Thus, thanks to Federparchi-Europarc Italia's relentless promotional and technical support work, a great interest in the tool developed among parks, regions, and the Ministry of the Environment.

Since then, the number of parks deciding to apply the Charter has been steadily increasing. Within a few years, the Apulia Region and the Marche Region decided to follow the example of Lombardy by promoting ECST among their regional parks. In 2011, the Italian Ministry of the Environment signed the first of a series of agreements with Federparchi-Europarc Italia, including support for the certification of some national parks and seminars and studies on ECST. In 2012, the Monte Rufeno Regional Reserve is European ECST area no.100.

In 2013, Federparchi-Europarc Italy receives the "Special Tourism Award" from the EUROPARC Federation for its "proactive commitment to support Italian protected areas in the implementation of ECST". In 2014, the Torre del Cerrano Marine Protected Area is the first marine area in Europe to receive the Charter. In 2015, two parks (the Parco Naturale Adamello Brenta and the Parco Regionale Dune Costiere) become the first ECST Phase II partners.

Today the Italian network has 36 certified areas and many more are candidates.

Italian protected areas like the Charter because it should be remembered that almost all Italian parks are inhabited territories. Dialogue, collaboration and the consent of the local communities that live and work in the area is therefore essential. ECST, with its voluntary nature, its defined scope, and its clear objectives, is a very effective support to the instruments of public participation that Italian law already provides for. The Charter therefore responds to a real need felt by park management bodies.

Another general aspect: Italy is a tourist destination of excellence. The tourism market is very important for the country, but the institutional players involved in the sector are many and often disconnected. For this very reason, it is essential to develop coordination between the policies on the ground, which can foster development without jeopardising "capital" (the cultural and natural heritage). The methodology proposed by ECST may also be an excellent response to this need.

The international side of the Charter is also a very attractive element for parks, which perceive the appeal and potential of receiving recognition at a European level with ECST.

Without any doubt, the role played by Federparchi-Europarc Italia in recent years has been decisive for the success of ECST in Italy. The federation coordinates and animates the Italian network and spreads awareness of ECST, including through political lobbying towards institutions. Above all, it offers technical assistance to the protected areas that request it: first of all this technical support takes the form of continuous and high-quality accompaniment of the park up to its candidacy. Then, after accreditation, the park receives support for monitoring and continues to benefit from training and refresher courses through technical seminars and exchanges. The commitment of the Ministry for the Environment and some Regions, which have also made financial resources available, has also been decisive in increasing the number of certified parks.

As these above mentioned elements show, ECST has been promoted, managed, and perceived as a national network programme, and not just as many individual park routes.

Another distinguishing point for the Italian experience is the dialogue with the private sector, which has been actively involved from the outset, already in ECST Phase I. In fact, private operators, in fact, are also invited to start the Charter process together with the park and the public authorities, while obviously maintaining different roles and responsibilities. In many cases, they have proved to be a great strength of the Italian ECST pathways.

## 4. The "Torre del Cerrano" Marine Protected Area

The Marine Protected Area "Torre del Cerrano" was established by ministerial decree on October 21 2009 (EUAP code 1226, extension: 3,430 hectares, coastline involved: 7,103 metres) and comprises a territory that stretches on the coast of Teramo between the two municipalities of Pineto and Silvi. This area is subdivided into zones subject to different protection regimes, taking into account the environmental characteristics and the socio-economic situation there. It provides for a restricted zone B (general reserve), a square area of about one km on each side facing Torre del Cerrano, a zone C (partial reserve) of 14 square km, which covers the entire extension of the sea front up to about 2 km from the coast, and a large trapezoidal zone D (protection) of about 22 square km up to the three-mile limit (Fig. 1).

Figure 1 – "Torre del Cerrano" PMA Zones (Reference I.I.M. nautical chart No. 43 scale 1:100,000)
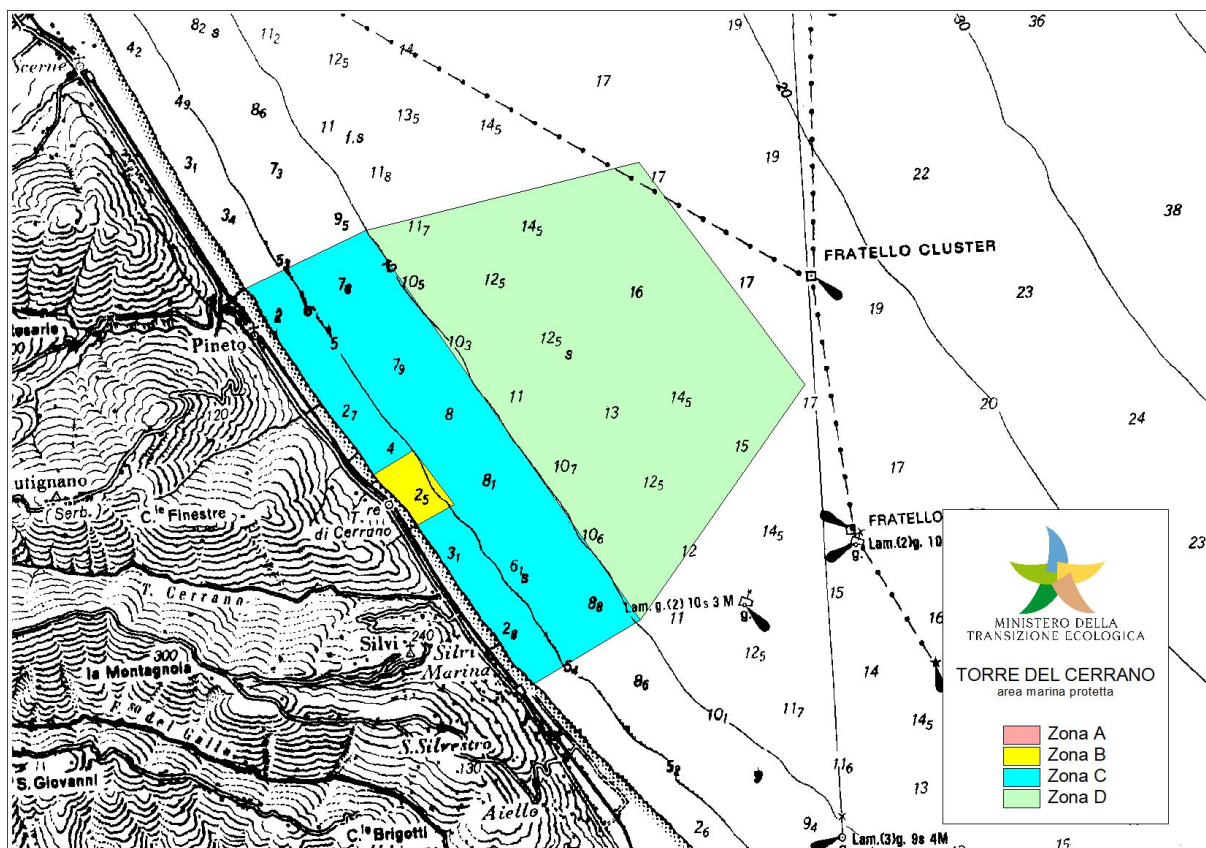


There are several reasons that led the establishment of this marine protected area. First of all, the coexistence of different habitats in the waters of the "Torre del Cerrano" Marine Protected Area, which "presents two distinct environmental typologies in close relation to each other: the typical Adriatic sandy seabed, which characterizes the largest portion of the area, and

some parts of the bottom reefs, both by the semi-submerged rocks of the ancient port of Atri and the submerged structures of the provincial marine protection oasis, as well as some outcrops of conglomeratic geological formations." (ministerial decree of 21 October 2009)

The area is home to a good number of marine animal species, both pelagic and benthic, and a small but important contingent of plant species.

The "Torre del Cerrano" MPA was the first marine protected area in Europe to obtain, in 2014, the European Charter of Sustainable Tourism. That has allowed it to represent at European level a model of "sustainable" and efficient Park that pursues the protection, promotion and enhancement of the territory, through the involvement of all the actors. In 2018 "Torre del Cerrano" MPA, started the process of renewing the Charter.

The following information and considerations relate to the data used to reapply for renewal of the Charter - Phase 1.

### 4.1 The tourism context

Among the direct anthropogenic impacts, those related to tourism activities are certainly a determining factor in areas, such as that of the MPA "Torre del Cerrano", affected by significant summer tourist flows. The coastal strip is an important transition between ecosystems, where we find habitats hosting highly specialised plant and animal species, but also the main tourist attraction of the area. Tourism activities attracts thousands of tourists and visitors every year and, if managed in a "sustainable" way, can rapresent a strategic economic sector for the territory.

The quality of tourism offer, and the composition of the demand are a direct consequence of all the businesses that directly and indirectly, can offer tourism services, to coordinate and network to their needs and expanding, over time, the users catchment area. The data reported here represent an overview of the tourism sector in the ECST area.

The "Torre del Cerrano" Marine Protected Area lies between the municipalities of Silvi and Pineto, towns on the Adriatic coast whose seaside development originated in the period between the two World Wars. The development of "second home" phenomenon has produced, subsequently, different effects and consequences on the socio-economic context of the Abruzzo Region. The coastal municipalities have benefited to a certain extent, from the expansion of holiday homes by developing the connections and services present on their territory.

This led to the creation of collateral economic activities that contributed to the settlement of the population in the coastal towns of Teramo province, also leading to a redistribution of the regional population along the coastal areas. In the years that followed, Pineto and Silvi became the destination for tourists, both Italian and foreign, who chose these beaches to spend their holidays for their tranquillity, clean sea and the beautiful pine forest behind the beach, an example of an ideal family holiday.

In 2017 (ISTAT data refers to the period in which the Charter renewal dossier was presented), with 104.000 arrivals, Pineto and Silvi attracted around 19% of the tourism of the entire Teramo province and have grown by over 27% in the previous fifteen years, although the number of overnight stays has remained constant. Pineto recorded 398,000 overnight stays, compared with 270,000 in Silvi, and a similar number of arrivals (50,000 in Pineto and 54,000 in Silvi).

Foreigners account for 23% of total overnight stays in Pineto and 15% in Silvi (in the province of Teramo they account for 15% of overnight stays in the area). As far as accommodation facilities are concerned, the tourist offer is equal to 9,100 beds, equally distributed between the two municipalities, representing 18% of the accommodation capacity in the province of Teramo. The type of accommodation is very different in the two municipalities: in Silvi 60% of the beds are in hotels, and only 38% in Pineto.

The analysis on years 2012-2017, shows how the recovery (after 2009, the year of the L'Aquila earthquake) in terms of tourist arrivals derives from a greater attractiveness for national visitors, with the share of Italian tourists increasing by about 20% in recent years, while the foreign component remains stable. On the other hand, overnight stays appear to be slightly down, mainly due to the decrease in the number of nights spent in the area by foreign visitors (-10% in the years considered).

### 4.2 Stakeholder

The European Charter for Sustainable Tourism involves everyone and it is open to anyone who wants to cooperate constructively with the protected areas institutions and network with other operators. To this end, the stakeholders have been promptly informed of the MPA's decision to renew its membership of ECST, and the schedule of meetings has been communicated well in advance. The stakeholders involved are: Local Authorities, farmers, restaurateurs, managers/owners of accommodation facilities, local guides, cultural and environmental protection associations, land professionals and local development agencies. The involvement of these actors has been continuous and, direct throughout the process by, sharing the materials of the meetings, collecting their contribution also outside the scheduled times and trying to attract the interest in participation also from subjects who had not joined the initiative during the initial phase.

The local stakeholders that took part in the process of renewing the ECST candidacy of the "Torre del Cerrano" Marine Protected Area are the following:
- 2 Protected Areas: AMP "Torre del Cerrano", Ris. Nat. Reg. WWF Oasis "Calanchi di Atri";
- 3 Local Public Authorities: Municipality of Pineto, Municipality of Silvi, Province of Teramo;
- 4 Universities and 1 School Institute;
- 26 Private tour operators;
- 13 Associations.

### 4.3 The shared strategy for sustainable tourism

The methodology for constructing the new ECST Strategy for the "Torre del Cerrano" Marine Protected Area was characterised by an inductive approach. Two cycles of meetings on the territory were constructed with the aim of redefining a common strategy for developing more sustainable tourism within the ECST area. Therefore, from the initial meetings of the participatory process the four strategic axes (Fig.2) emerged through a critical and shared re-reading of the 2014-2018 Plan of Actions and a joint proposal - and represent the result of the eight strategic priorities of the Authority and the five that emerged from the operators in the area and the representatives of the municipal administrations.

Each strategic axis is linked to an operational objective that has served to guide and stimulate the development of concrete actions more effectively.

Figure 2 − The Sustainable Tourism Development Strategy 2019-2023
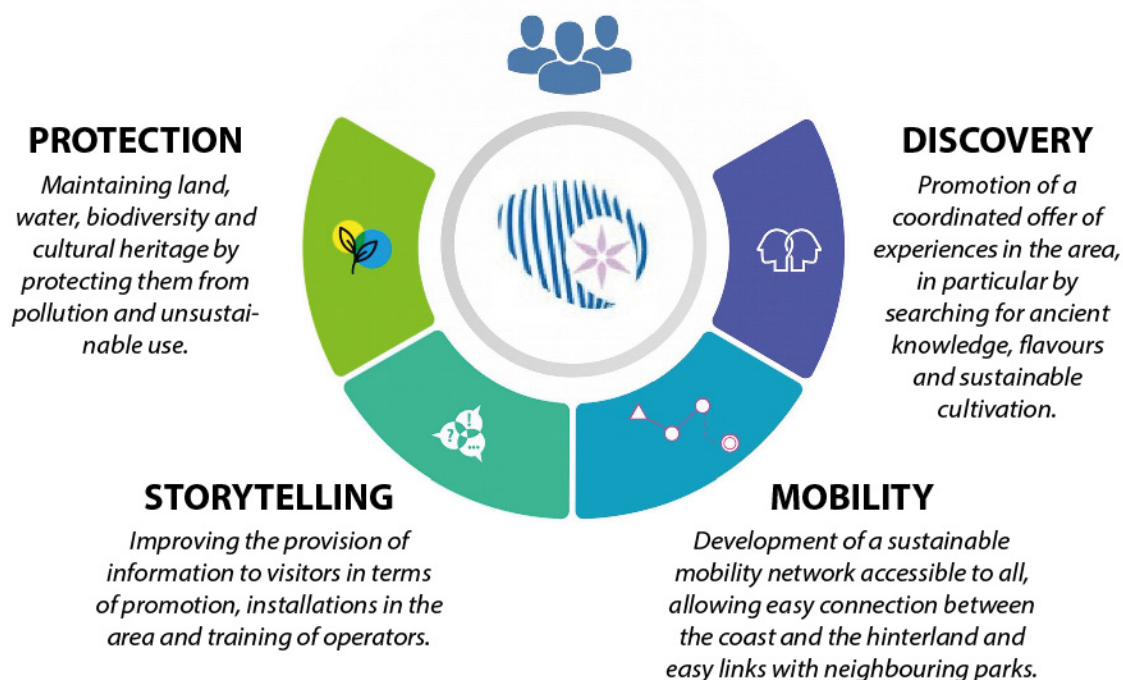


These strategic axes are intended to provide coherence to the actions proposed by the stakeholders involved and to indicate the general priorities of the Plan itself. The efforts of each of the "stakeholders" have focused on the put into practice of these axes, through alliances built within the Charter Forum.

Crossing the four identified strategic axes with the ECST Key Issues for Sustainable Tourism resulted in the strategic matrix of the Plan.

### 4.3 Analysis of strengths and weaknesses

Among the various activities carried out by the thematic tables coordinated by the managing body, the activity that deserves special mention is the one carried out for the definition of a first common vision on the territory's strengths and weaknesses, opportunities, and threats for the development of sustainable tourism in the marine protected area deserves a special mention. The results of this vision were used to carry out a SWOT[4] analysis, which, as is known, "is one of the most widespread methodologies currently used to analyse complex economic-territorial contexts, since it is a tool that guides the critical analysis of different and complementary information related to a given reference context which allows drawing from such information valuable indications for the definition of appropriate development strategies and/or intervention policies" (Scipioni and Mazzi, 2011, p. 75).

Characterizing factors (strengths, weaknesses, opportunities, and threats) are primarily determined in two ways: at the "desk" and through work group (participatory). In the former, it is the researcher who formulates the forecast based on data collected by "expert knowledge" in a neutral and objective manner. However, participatory techniques are used in the latter to identify shared scenarios through joint analysis between experts and stakeholders. (Fera, 2008).

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[4] The acronym famously refers to the aspects that the SWOT analysis examines: Strengths, Weaknesses, Opportunities, Threats.

The second is a critical analysis of the results of the SWOT survey conducted by "Torre del Cerrano" MPA managers and included in the Strategy and Action Plan Document. The above-mentioned critical analysis was carried out by the author to achieve a positive comparison for the identification of the factors characterizing the protected area. The contents of the first survey, known as the participatory survey, are the result of a territorial analysis of the protected area and have been shared and thoroughly studied with all public and private subjects operating in the area, through collective and individual meetings. The distinguishing factors were identified using a "Desk" methodology, which entails the researcher's observations based on contextual data (the prediction of scenarios is based on neutral and objective "expert knowledge").

The issues highlighted concerns about the geographical location, environmental quality, aspects of hotel and non-hotel accommodation, tourist attraction factors, entrepreneurial presence, and territorial competitiveness levels (Palmeira, 2017).

Firstly, among the "strengths" there are: the marine protected area's favorable location, good infrastructures (particularly highways and railways), close (proximity) of sites of cultural interest; the wine and food tradition; the well-developed coastal accommodation system, centred on the hotel sector, of medium quality and with a good quality/price ratio; and, also a significant emphasis on sustainability. Below there are details of the results of the analysis:

- Localisation
  - Central geographical location;
  - Good connections to Pescara and Ancona airports;
  - Proximity to the ports of Giulianova, Roseto degli Abruzzi and Pescara
  - Good motorway connections (A14, A25);
  - Proximity to sites of historical, cultural, traditional, enogastronomic;
  - Beautiful landscape in a sustainable and relaxing tourist environment;
  - Sense of security, absence of petty crime.
- Hospitality
  - Well-developed coastal accommodation system of average quality;
  - Good diversification of the accommodation offer, particularly for families;
  - Sense of hospitality neither mediated nor artificial;
  - Good quality/price ratio and prices fairly in line with the average;
  - Medium-level event calendar, with some "must-see" events.
- Sustainability
  - Cycle path: "Adriatic Green Corridor"
  - Presence of projects linked to the promotion of sustainability of accommodation structures and tourist services ("Friend of the Park");
  - Birth of projects linked to electric and sustainable mobility in the territory.

Among the "weaknesses" there are elements that we could define as "recurring", i.e. elements that had already emerged from the analysis carried out in the first five years of the Charter, such as the low popularity of local attractive factors, the low attitude of operators to mutual collaboration and the issue of seasonality. In the participatory activities and in the analysis "at the desk", new elements and new needs emerged on the part of the operators involved in the Forum, also thanks to the numerous training activities that the MPA implemented, such as, for example, the need for a true integration between "nature and culture" and for a stronger interconnection with Atri and with the other nearby Protected Areas:

- Attractive factors
    - Some attractions (cultural, religious, food and wine) are only known in within specific niches;
    - Lack of integration between natural and cultural attractions for mutual promotion.
- Interconnection
    - Poor connection between the seaside area and the immediate hinterland and with the other Abruzzo Protected Areas;
    - Weak railway accessibility, especially to Rome.
- Business dynamism
    - Still weak associative process among the operators and little attitude to produce "value chains";
    - High average age of the operators and low generational turnover;
    - Guest information system to be improved, developed and coordinated.
- Seasonality and competitiveness
    - Operations concentrated in the summer period with no extension of the season;
    - Low visibility of the territory in terms of promotion and marketing, especially for foreign markets.

With reference to the opportunities the evidence mainly concerned those that may arise from the new opportunities to de-seasonalise the tourist offer beyond the summer period deriving in particular from the participation of the MPA in the Interreg Med DestiMED Project, taking advantage of the possibility to explore the seaside coast, the pine forest, but also the countryside and hill areas by visiting villages, oil mills, places of art:

- Innovation in mobility services in the area, with attention also for the disabled, and connections with the hinterland;
- Seasonal adjustment of the tourist offer beyond the summer period, taking advantage of the possibility of practising sport and exploring the seaside Riviera, the pinewoods, but also the countryside and hillside areas, visiting villages, oil mills, places of art, etc.
- High environmental quality of the accommodation facilities combined with authenticity of the welcome, staff training and well-being in the area;
- Innovative and diversified promotion and marketing of the area.

Referring to and threats the evidence mainly concerned those linked to the cut in funding for tourism, as well as a chronic lack of a real tourism development strategy by the Region Abruzzo and poor management of tourist services and urban decorum:

- Deterioration of the state of the water and increased pollution of the coast and the territory;
- Low interest of inhabitants and tour operators in their land in terms of environmental awareness;
- Non-competitive individualism of structures;
- Loss of traditions and territorial identity;
- Cutting of funds for tourism by local politicians and poor management of tourist services and urban decorum.
- Erosion phenomena
- Overtourism

In conclusion, the "desk" analysis confirmed the issues related to the characterizing factors highlighted in the "participatory" analysis, but, with reference to the "strong points", it further highlighted some others such as the proximity of the port facilities of Giulianova and Roseto degli Abruzzi and Ancona airport, in addition to that of Pescara; but, above all, it draws attention to the importance of the Adriatic Cycle Route, also known as the 'Green Adriatic Corridor', the track that runs along the Adriatic coast. In fact, the Abruzzo Region has financed the completion of the entire 132 km section of the regional network, valuing the important potential of cycle tourism. It also takes into account other threats such as those that may derive from erosion phenomena (both of the beaches and of the hills behind the coastal stretch), from the pollution levels of the Adriatic Sea water and from the risks related to the exceeding of the tourist load capacity.

## 5 Concluding Discussions and Implications

The analysis of the work carried out in the "Torre del Cerrano" MPA produced results on:
- The role of the strategic and participatory approaches for the effectiveness of ecotourism development;
- How these approaches can be effective.

The analysis theoretically confirmed (Yin, 2013) the central role played by strategic and participatory approaches in enhancing the effectiveness of the ecotourism development process within PAs. Such approaches are not only important, but pivotal to the effectiveness of the ecotourism development process within PAs. The analysis also highlighted those factors that are affected by these approaches (Musso, 2019).

Aside from the economic and social factors, another important factor emerged: the cultural factor. This lends support to the literature's thesis that ecotourism is characterized by a mutual interdependence among economic and socio-cultural aspects related to natural resource conservation (Ceballos-Lascurain, 1996; Das and Chatterjee, 2015).

The analysis also identified appropriate good practices that should be implemented for these approaches to be effective in the ecotourism development process, while simultaneously improving the three pillars of sustainable development (ecological, economic, and social).

Ecotourism can be effective when it is:
- driven by a conservation-oriented authority such as a PA; and
- guided by a participatory strategy such as the one promoted by the ECST.

The analysis confirms that ecotourism development can be improved, primarily by adopting a holistic approach (Musso, 2019), and provides additional credit to previous streams of literature.

This viewpoint is intended to include not only the site-specific social, economic, and environmental dimensions of ecotourism, but also the cultural dimension. Considering the latter, the analysis demonstrates the importance of PAs in the development of ecotourism. When guided by a collaborative and strategic approach, such as the one required by the ECTS, a PA can function as a visionary catalyst. Through a process of stakeholders' engagement, such catalytic action can activate a positive and reinforcing loop that can improve local socioeconomic and ecological wellbeing.

### 5.1 Critical issues

While there are many positive aspects, there are also some critical points and weaknesses.

The first critical aspect is coordination, planning, and the actual possibility of completing the Charter's strategy and action plan in five years. The constant political and strategic changes that characterize the Italian situation at the national, regional, and local levels will inevitably have serious consequences for protected areas. It is also frequently difficult to involve public authorities actively and continuously in the Forum, despite the fact that they are critical for coordinating policies in the area.

The protected areas' perpetual uncertainty about the public funds avaible to implement what has been planned is also a serious issue.

Another source of weakness sometimes the very reasons why parks begin the ECST process, pressure coming from the top (ministry or region) or interest in gaining European recognition without fully adhering to the concept and method. Similarly, the change of presidents and directors of certified parks is a delicate matter: sometimes, the new management of the protected area does not fully understand or underestimates the importance of the ECST route, which they have not "seen come into being." In these cases, ECST becomes just one of many projects entrusted to a single responsible official, rather than the Park Authority's overall working method. When this occurs, ECST may lose its value, and the work done with the territory through the Forum may become ineffective.

### 5.2 Looking ahead

Looking ahead, it appears critical to strengthen and support the tremendous commitment of the many chairmen, directors, and officers who, despite the challenges, are enthusiastically implementing the Charter in their respective territories with excellent results.

Dialogue between the Park Authority and the private sector will become increasingly important in the future, particularly as Phase II of the ECST is developed. To be successful, however, Phase I must be solid, and the Park Authority as a whole, as well as the public authorities, must always prioritize the Charter. Only by doing a clear and stable long-term political and strategic framework can be established that private parties can decide to engage.

The strength of the Italian system is also the national network, powered by Federparchi-Europarc Italia, should be maintained, also through the development of joint projects. At the same time, it is critical to emphasize and improve the European aspect of ECST. This is also the path outlined in the Europarc Federation 2020 Strategy. The Federation has already done and can do a lot in terms of European projects, exchanges, technical seminars, events, lobbying European and international institutions, involvement of private ECST partners in the European network, and so on. In this regard, it will be necessary in the future for Italian protected areas to strengthen their commitment to the European network in terms of presence, participation, information exchange, and involvement.

ECST in Italy is an extremely interesting experience that should be preserved, enhanced, and valued at the local, national, and European levels.

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# CAR PRICE PREDICTION IN THE USA BY USING LINEAR REGRESSION

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## *Abstract*

*This paper studies a linear regression model to predict the car prices for the U.S market, in order to help a new entrant understanding important pricing factors/variables in the U.S automobile industry. The prediction of a car price has become a high-interest research area, as it requires significant knowledge of the field. I have applied to a highly comprehensive analysis with all data cleaning, exploration, visualization, feature selection and model building. The data used for the prediction were collected from the web portal fred.stlouisfed.org using web scraper, written in Python/Jupyter programming language. According to a problem solving approach, I have split it to 5 parts (Data understanding and exploration, Data cleaning, Data preparation: Feature Engineering and Scaling, Feature Selection using RFE and Model Building and Linear Regression Assumptions Validation and Outlier Removal). The points are symmetrically placed along a diagonal line in the former plot and along a horizontal line in the later plot in the examination plots of observed against forecast values or residuals versus projected values. According to the table of Residuals vs. Predicted, many points with extremely high residual values suggest that the model predicts one item adversely. Other well-known raised residual points may possibly be significant outliers.*

## 1. Introduction

In this paper the given purpose is to explain the price of cars in the US where the liner regression is used, and which helped to estimate predictions. Respectively, an accurate estimation of automobile prices requires specialized expertise, as quality typically relies on several different features and variables.  In addition, the amount of gasoline used in the vehicle and the fuel usage per mile have a significant effect on a car's price leading to regular adjustments in a fuel 's demand.

    This analysis is organized in this structure:

- Data understanding and exploration
- Data cleaning

- Data preparation: Feature Engineering and Scaling
- Feature Selection using Recursive Feature Elimination (RFE) and Model Building
- Linear Regression Assumptions Validation and Outlier Removal.

## 2. Literature Review

Noor and Jan (2017) use multiple linear regression to construct a model for forecasting car prices. The dataset was generated during the two-month span and included the following characteristics: size, cubic ability, exterior color, date of posting of the ad, amount of ad views, power steering, kilometer mileage, type of transmission, type of motor, area, registered area, layout, edition, make and model year. With the Results setup researchers were able to reach 98 per cent predictability. The authors have suggested prediction model based on the single machine learning algorithm in the relevant research seen above. Nevertheless, it is notable that a standard approach to machine learning algorithms did not produce impressive predictive outcomes and could be improved by combining multiple methods of machine learning into an ensemble.

Gonggie (2011) suggested a model that would be developed using ANN (Artificial Neural Networks) to estimate the price of a used vehicle. He considered several attributes: passed miles, estimated car life and mark. The new model was developed in order to cope with nonlinear data interactions, which was not the case for prior models using standard linear regression techniques. The non-linear model was able to forecast car prices better than other linear models with greater accuracy.

Wu et al. (2009) performed analysis of car price estimation utilizing a knowledge-based neuro- fuzzy method. They took the following characteristics into account: model, year of production, and engine size. Their model of projection had comparable findings to the simplistic model of regression. They have created a specialist program named ODAV (Optimal Distribution of Auction Vehicles), since there is a strong demand for auto dealers to deliver the vehicles at the end of the leasing year. This method offers information into the best car rates, as well as the place where the best quality can be earned. Regression model focused on neighboring k-nearest machine learning algorithm was used to predict a car's speed. This program appears to be remarkably effective, as it has exchanged more than two million vehicles.

In his thesis research Richardson (2009) offered a specific approach. His expectation was that more robust vehicles should be made by automakers. Richardson implemented multiple regression analyses and found that electric vehicles have maintained their worth longer than regular vehicles. This has origins in urban warming issues and offers greater fuel efficiency.

## 3. Methodology and Problem Solving

### 3.1 Data Understanding and Exploration

Let's first have a look at the dataset and understand the size, attribute names etc. Figure 1 shows the data types and names of the columns of the dataset and  according to the estimation Python is used where it helps to apply to the liner regression.

Figure 1 − Understanding the features and data Observations on Target Variable- Price

```
cars = pd.read_csv("auto_with_col (1).csv")
cars.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 205 entries, 0 to 204
Data columns (total 26 columns):
 #   Column           Non-Null Count   Dtype
---  ------           --------------   -----
 0   car_ID           205 non-null     int64
 1   symboling        205 non-null     int64
 2   CarName          205 non-null     object
 3   fueltype         205 non-null     object
 4   aspiration       205 non-null     object
 5   doornumber       205 non-null     object
 6   carbody          205 non-null     object
 7   drivewheel       205 non-null     object
 8   enginelocation   205 non-null     object
 9   wheelbase        205 non-null     float64
 10  carlength        205 non-null     float64
 11  carwidth         205 non-null     float64
 12  carheight        205 non-null     float64
 13  curbweight       205 non-null     int64
```

The target variable price has a positive skew; however, majority of the cars are low priced. More than 50% of the cars (around 105-107 out of total of 205) are priced 10,000 and close to 35% cars are priced between 10,000 and 20,000. So around 85% of cars in US market are priced between 5,000 to 20,000. Based on above observations and graph on right side (KDE/green one) it appears there are 2 distributions one for cars priced between 5,000 and 25000 and another distribution for high priced cars 25,000 and above. (Notice the approximate bell curve from little less than 30000 up to 45,000/50,000).

Data Exploration
To perform linear regression, the target variable should be linearly related to independent variables. Let's see whether that's true in this case. Figure 2 shows the tabular form of the dataset on which we will carry the operations.

Figure 2 − Var indicators

```
#creating df  with numeric var's only
cars_numeric=cars.select_dtypes(include=['float64','int64'])
cars_numeric.head()
```

| | car_ID | symboling | wheelbase | carlength | carwidth | carheight | curbweight | enginesize | boreratio | stroke | compressionratio | horsepower | peakrpm | citympg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 3 | 88.6 | 168.8 | 64.1 | 48.8 | 2548 | 130 | 3.47 | 2.68 | 9.0 | 111 | 5000 | 21 |
| 1 | 2 | 3 | 88.6 | 168.8 | 64.1 | 48.8 | 2548 | 130 | 3.47 | 2.68 | 9.0 | 111 | 5000 | 21 |
| 2 | 3 | 1 | 94.5 | 171.2 | 65.5 | 52.4 | 2823 | 152 | 2.68 | 3.47 | 9.0 | 154 | 5000 | 19 |
| 3 | 4 | 2 | 99.8 | 176.6 | 66.2 | 54.3 | 2337 | 109 | 3.19 | 3.40 | 10.0 | 102 | 5500 | 24 |
| 4 | 5 | 2 | 99.4 | 176.6 | 66.4 | 54.3 | 2824 | 136 | 3.19 | 3.40 | 8.0 | 115 | 5500 | 18 |

These vars appears to have a linear relation with price: carwidth, curbweight, enginesize, horsepower, boreration and citympg. Other variables either don't have a relation with price or relationship isn't strong. None of the variables appear to have polynomial relation with price.

In linear regression assumptions validation section, we will check for linearity assumption in detail. Figure 3 shows the useful insights from Correlation Heatmap (which shows a 2D correlation matrix between two discrete dimensions), dependent variables and independent variables.

Figure 3 — Heatmap Correlation
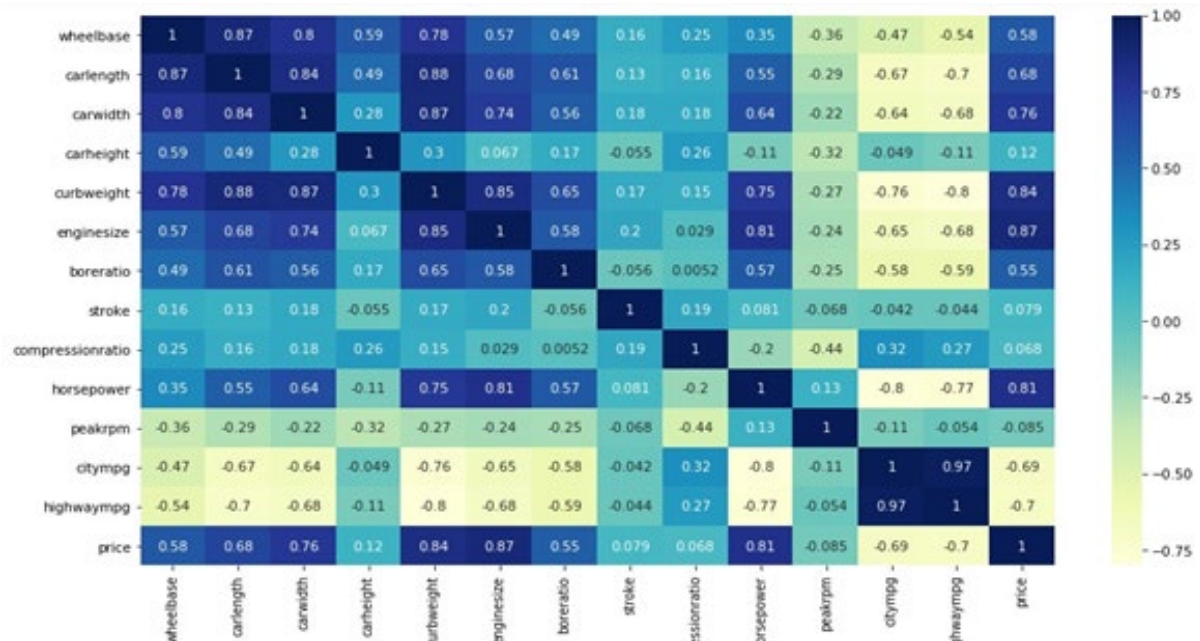


Positive correlation: price highly correlated with enginesize, curbweight, horsepower, carwidth (all of these variables represent the size/weight/engine power of the car)

Negative correlation: price negatively correlation with mpg var's citympg and highwaympg. This suggest that cars having high mileage may fall in the 'economy' cars category or in other words indicates that Low priced cars have mostly high mpg

Correlation among independent variables: many independent variables are highly correlated; wheelbase, carlength, curbweight, enginesize etc. are all measures of 'size/weight', and are positively correlated

Since independent variables are highly correlated (more than 80% correlation among many of them) we'll have to pay attention to multicollinearity, which we will check in assumptions validation section using VIF score

### 3.2 Data Cleaning: Missing values and feature data type check

In this section we will check dataset for missing values and check the datatypes of different features. Figure 4 shows the data types and names of the columns of the dataset and meanwhile Figure 5 shows the conversion of desire column.

Figure 4 — The types of columns of the dataset

```
cars.info()

#no missing values

#all var's in correct format, however since symboling is a categorical var we need to change its type

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 205 entries, 0 to 204
Data columns (total 26 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   car_ID            205 non-null    int64
 1   symboling         205 non-null    int64
 2   CarName           205 non-null    object
 3   fueltype          205 non-null    object
 4   aspiration        205 non-null    object
 5   doornumber        205 non-null    object
 6   carbody           205 non-null    object
 7   drivewheel        205 non-null    object
 8   enginelocation    205 non-null    object
 9   wheelbase         205 non-null    float64
 10  carlength         205 non-null    float64
 11  carwidth          205 non-null    float64
 12  carheight         205 non-null    float64
 13  curbweight        205 non-null    int64
 14  enginetype        205 non-null    object
 15  cylindernumber    205 non-null    object
 16  enginesize        205 non-null    int64
 17  fuelsystem        205 non-null    object
 18  boreratio         205 non-null    float64
 19  stroke            205 non-null    float64
 20  compressionratio  205 non-null    float64
 21  horsepower        205 non-null    int64
 22  peakrpm           205 non-null    int64
 23  citympg           205 non-null    int64
 24  highwaympg        205 non-null    int64
 25  price             205 non-null    float64
dtypes: float64(8), int64(8), object(10)
memory usage: 41.8+ KB
```

Figure 5 − The conversation of the column

```
# converting symboling to categorical
cars['symboling'] = cars['symboling'].astype('object')
cars.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 205 entries, 0 to 204
Data columns (total 26 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   car_ID            205 non-null    int64
 1   symboling         205 non-null    object
 2   CarName           205 non-null    object
 3   fueltype          205 non-null    object
 4   aspiration        205 non-null    object
 5   doornumber        205 non-null    object
 6   carbody           205 non-null    object
 7   drivewheel        205 non-null    object
 8   enginelocation    205 non-null    object
 9   wheelbase         205 non-null    float64
 10  carlength         205 non-null    float64
 11  carwidth          205 non-null    float64
 12  carheight         205 non-null    float64
 13  curbweight        205 non-null    int64
 14  enginetype        205 non-null    object
 15  cylindernumber    205 non-null    object
 16  enginesize        205 non-null    int64
 17  fuelsystem        205 non-null    object
 18  boreratio         205 non-null    float64
 19  stroke            205 non-null    float64
 20  compressionratio  205 non-null    float64
 21  horsepower        205 non-null    int64
 22  peakrpm           205 non-null    int64
 23  citympg           205 non-null    int64
 24  highwaympg        205 non-null    int64
 25  price             205 non-null    float64
dtypes: float64(8), int64(7), object(11)
memory usage: 41.8+ KB
```

### *3.3 Data Preparation: feature engineering*

In this section we prepare the data for model building and desire operations. Enable to make future operations we prepared the data. Data preparation contains drop, merge, and creating dummies. Scaling features though not necessary in (Multiple Linear regression) MLR but it's good to do it as it makes interpretation of regression coefficients easier

### *3.4 Model Building and Feature Selection Using RFE (Recursive FeatureElimination)*

Since our dependent variable price looks to be linearly related to most of the independent variables, we are using Linear Regression (because of in statistics when dependent variable is linearly related to independent variable then we apply Linear Regression) only and no other types of regression like Polynomial, Random Forest/Boosting regression etc.

Massive overfitting: all features in model is never a good idea unless features are too less and all of them are important, so we used using recursive feature elimination to reduce dimensionality. First, we need to split the data into train and test as shown in Figure 6. Then we perform some R-square and root mean squared error (RMSE) on train and test data and we obtain some values of R-square on train and test data as well and also RMSE on train and test data after performing these operations as these values are clearly shown in Figure 6.

Figure 6 – Data Split

```
In [53]:  # Model with all features
          from sklearn import linear_model
          from sklearn.linear_model import LinearRegression

          lm=LinearRegression()
          lm.fit(X_train,y_train)

          y_pred_test=lm.predict(X_test)
          y_pred_train=lm.predict(X_train)
```

```
In [54]:  ## Evaluation metrics

          #Rsqaure
          from sklearn.metrics import r2_score

          print('R-sqaure on train data: {}'.format(r2_score(y_true=y_train, y_pred=y_pred_train)))
          print('R-sqaure on test data: {}'.format(r2_score(y_true=y_test, y_pred=y_pred_test)))

          #Standard error/RMSE
          error_train=y_pred_train-y_train
          error_test=y_pred_test-y_test

          print('RMSE on train data: {}'.format(((error_train**2).mean())**0.5))
          print('RMSE on test data: {}'.format(((error_test**2).mean())**0.5))

          R-sqaure on train data: 0.9756892503873289
          R-sqaure on test data: 0.8382621393399081
          RMSE on train data: 1213.0021196738412
          RMSE on test data: 3365.465234388078
```

Feature selection using RFE
First we decide optimal number of features rather than arbitrarily specifying count of features to be used in model in the RFE function.

From the graphs as shown in Figure 7 we find:
- – R square for test data peaks at 13 features and at this point model generalizes well as train R2 is v close to test. Train R2 keeps on increasing beyond 13 features but R2

keeps increasing as you add more features to train data. We have selected the number of features where model accuracy and generalization both are at satisfactory level.

– RMSE for test data is lowest at 13 features and beyond that it increases. Train RMSE at 13 also looks good, adding more features to train decreases RMSE but again there is always a tradeoff between removing features (aka reducing complexity) and model performance. So, we will go with 13 features (Figure 8).

Figure7 – Features count
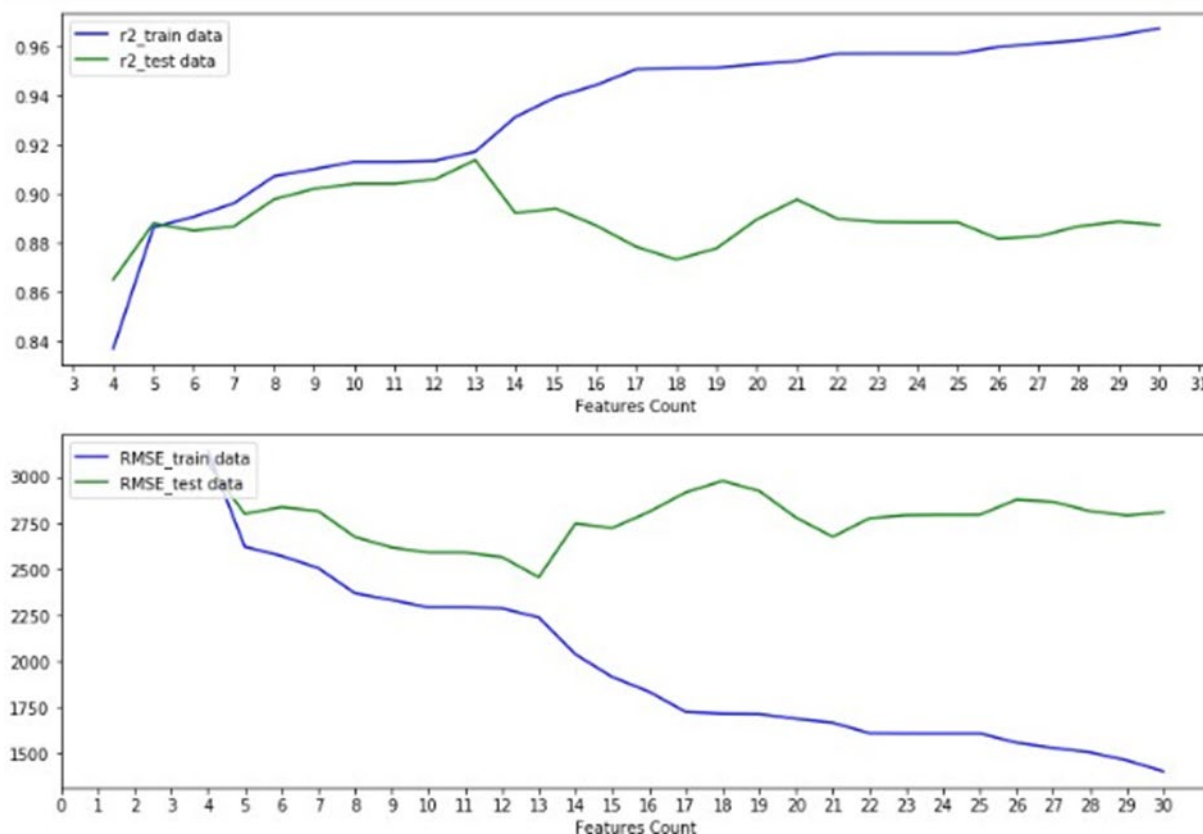


## 3.5    *Linear Regression*

To detect linearity lets inspect plots of observed vs. predicted values or residuals vs. predicted values. The desired outcome is that points are symmetrically distributed around a diagonal line in the former plot & around horizontal line in the latter one.

From the graphs shown in Figure 9:

1.  Obs vs predicted shows that most of the values are closer to the diagonal line, however some are not which is a problem.
2.  Resi vs pred graph does not give a conclusive evidence that residuals are evenly scattered around the zero line as Resi values increase with increase in predicted values, so assumption of linearity can't be confirmed.
3.  There seems to be presence of outliers, which might be giving a non-conclusive enough Resi vs Predicted graph. Some points have very high residual values; a point (~ -3000, ~ 8000) shows one value is predicted negatively by the model. There are many other prominent high residual points which could be influential outliers.

Figure 8 − Model Building with optimal features

```
-------------------------R-Sqaure-------------------------------------------
R-sq for test data is 0.9006167424476529
R-sq for train data is 0.9172871967113265
-----------------------STANDARD ERROR/RMSE---------------------------------
RMSE for test data is 2455.655255247883
RMSE for train data is 2237.4263820988704
                      OLS Regression Results
==============================================================================
Dep. Variable:              price    R-squared:                     0.917
Model:                        OLS    Adj. R-squared:                0.910
Method:             Least Squares    F-statistic:                   120.1
Date:            Sat, 23 May 2020    Prob (F-statistic):         3.47e-64
Time:                    12:25:33    Log-Likelihood:              -1305.9
No. Observations:               143    AIC:                          2638.
Df Residuals:                   130    BIC:                          2676.
Df Model:                        12
Covariance Type:            nonrobust
==============================================================================
                          coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
const                 1.332e+04    200.770     66.366      0.000    1.29e+04    1.37e+04
carwidth              1622.7341    455.659      3.561      0.001     721.266    2524.202
curbweight            2009.8697    574.805      3.497      0.001     872.688    3147.052
enginesize            5314.0047    888.479      5.981      0.000    3556.256    7071.753
boreratio            -1613.9636    427.436     -3.776      0.000   -2459.595    -768.332
stroke                -945.7383    286.937     -3.296      0.001   -1513.409    -378.068
enginelocation_rear   1178.1547    369.229      3.191      0.002     447.679    1908.630
enginetype_rotor       714.2205    162.095      4.406      0.000     393.535    1034.906
cylindernumber_five    837.7928    283.402      2.956      0.004     277.116    1398.470
cylindernumber_four   1047.0367    526.494      1.989      0.049       5.431    2088.642
cylindernumber_twelve -629.3369    261.164     -2.410      0.017   -1146.018    -112.655
cylindernumber_two     714.2205    162.095      4.406      0.000     393.535    1034.906
car_company_bmw       1729.5095    211.128      8.192      0.000    1311.819    2147.200
car_company_porsche   1011.0676    289.741      3.490      0.001     437.850    1584.286
==============================================================================
Omnibus:                       30.332    Durbin-Watson:                 2.020
Prob(Omnibus):                  0.000    Jarque-Bera (JB):             61.739
Skew:                           0.922    Prob(JB):                   3.92e-14
Kurtosis:                       5.638    Cond. No.                   2.56e+16
==============================================================================

Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
[2] The smallest eigenvalue is 8.86e-31. This might indicate that there are
strong multicollinearity problems or that the design matrix is singular.
```

Observations from above numbers:

1. R-sqaure for both test & train looks good
2. RMSE for both is closer (test is little < train which is fine and shows that model generalizes well)

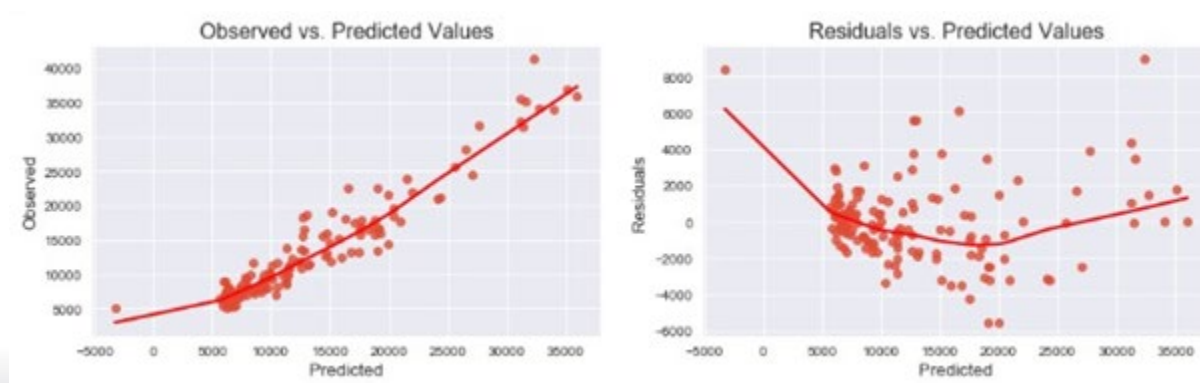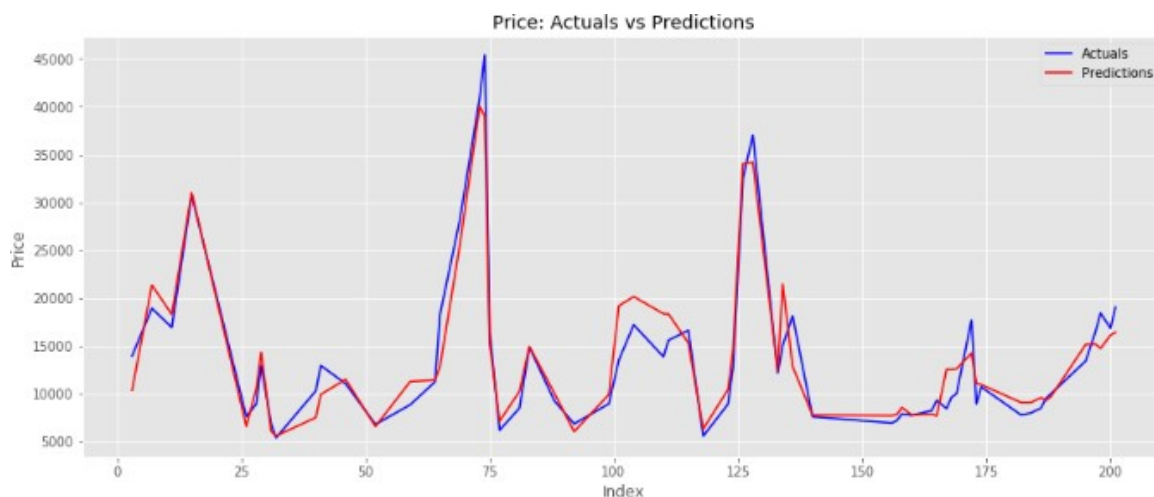Figure 9 − Comparation of Observed and Predicted Values

Figure 10 indicates the Actual vs Predictions price. Blue label indicates the actual price of the cars and red label indicates the predicted values of the cars.

Figure 10 − Relation of Actuals and Predictions



## 4.   Conclusions

According to the aim and methodology of this research may apply other countries with using the same statistical analysis. The precise structure explains and indicates poses if the variables where the price fluctuated over the cars with subject to the results and according to the understanding the features and data observations on target variable Price, the estimation illustrates information about, the goal variable price has an optimistic bias because most vehicles are low cost. Over 50 percent of the vehicles are priced at 10,000 and approximately 35 % are priced between 10,000 and 20,000. So, in the US industry about 85 per cent of cars are priced between 5,000 and 20,000.

On the basis of the above findings and graph on the right side there are 2 distributions: one for cars priced between 5,000 and 25,000 and another for high priced cars, at 25,000 and beyond. In the data exploration we have started to perform the liner regression. So, in detail, some var's seem to have a linear price relation: carwidth, curbweight, enginesize, horsepower, boreration, and citympg and certain factors either have no price relation or are not good association. Neither of these variables appear to have a polynomial relation to size. In the segment Validation of linear regression assumptions, we have tested for the linearity assumption. In the correlation heatmap, price is highly correlated with enginesize, curbweight, horsepower, carwidth and negatively correlated with mpg var's citympg and highwaympg, so, this means that high-mileage cars can fall into the 'economy' car category or, in other words, mean that low-priced cars often have high mpgs.

In the examination plots of observed versus forecast values or residuals versus projected values, the intended consequence is that the points are symmetrically arranged in the former plot along a diagonal line and in the latter along a horizontal line. According to the Residuals vs Predicted table, many points have very high residual values, indicating that the model negatively forecasts one value. There are also other elevated residual points that may theoretically be powerful outliers.

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# RETAIL AND GAMIFICATION
# FOR A NEW CUSTOMER EXPERIENCE
# IN OMNICHANNEL ENVIRONMENT[*]

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## Abstract

*The purpose of gamification is to foster the interest of the players/users and increase their involvement or direct certain behaviors. Specifically, it is a set of activities and processes to solve problems using or applying elements related to the game. This paper aims to explore the use of gamification to improve the customer experience in the retail field. This study is based on a qualitative approach with a literature review of the highly-influential articles on Web of Science and Scopus in Business and Management areas, referencing marketing experts. It also contains a case study on gamification. In Italy and in the Republic of San Marino, the company UCI Cinemas has implemented a promotional strategy for the sale of tickets for the film Fantastic Beats: The Crimes of Grindelwald. This promotional strategy is based on the combination of omnichannel retail and gamification.*

**Keywords**: Retail, Gamification, Promotion, Customer Experience, Omnichannel.

## 1. Introduction

The retail sector is in constant turmoil, characterized by a profound transformation linked to digitalization processes. These changes have affected multiple areas of the retail sector with the integration of stores with e-commerce through the implementation of omnichannel strategies and tools (Jocevski et al., 2019; Alexander & Blazquez Cano, 2020; Hübner et al., 2021). The pandemic has accelerated the digitalization process, with the introduction of new technologies

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(Pantano & Vannucci, 2019) affecting both consumer behaviors and retail business strategies and tools (Cakir et al., 2021; Fortuna et al.; 2021). In particular, digital innovation is used as a lever to recover the social and emotional component of the purchase, even in the store (Hagberg et al., 2016; Quach et al., 2020; Shi et al., 2020). In this framework, the development of digital games – as a retail marketing tool – is constantly growing (Üstündağ, 2020). The phenomenon of digital innovation in retail through digital gaming tools is still unexplored and deserves specific attention.

The paper starts with the analysis of the phenomenon of gamification, followed by a description of the evolution of gamification in the world under Section 2. Section 3 presents a concrete case study on gamification in the retail service sector and concludes with some considerations on the role of gamification in retailing.

## 2. What is Gamification?

The word "Gamification" was coined in 2002 by Nick Pelling, a computer programmer and game developer (Pelling, 2011). The concept of "gamification" became famous in February 2010 during the "D.I.C.E. Summit" ("Design Innovate Communicate Entertain") in Las Vegas. During this meeting, Jesse Schell made a session called "Design Outside The Box". He talks about an apocalyptic future in which gaming will go beyond the traditional boundaries of a console or PC to enter every moment inside human life. Each of us will become part of a great game where actions are tracked and rewarded with special points and bonuses (Viola, 2011). During his speech he said: "you will wake up in the morning and while you are washing your toothbrush will be equipped with a sensor capable of perceiving if you are brushing your teeth correctly. Well done! 10 points for brushing your teeth ... You have to do it for at least three minutes and if you do it ... there is a bonus for you! " (Petruzzi, 2017). In his speech he does not use the word "gamification" even though he outlines the phenomenon and its rules.

According to some scholars, gamification is: "the use of game design elements in non-game contexts" (Deterding et al, 2011). This definition of gamification was developed in 2011 and is still used internationally. Another definition of gamification is: "the process of using Game Thinking and Game Dynamics to Engage Audiences and Solve Problems" (Zichermann and Cunningham, 2011). Gamification has similarities with the theory of "nudges". these are elements that guide individual choices and behaviors without the use of orders and preserve the freedom of choice, like a "polite push" (Thaler and Sustein, 2008).

Gamification can be usefully used as a means of re-channeling undesirable consumer behavior (Insley and Nunan, 2014). This method sometimes fails in terms of engagement and can even harm employees and the work environment. Goals and rewards associated with play systems can be perceived negatively by employees, as a method for managers to control their performance. These findings are consistent with the negative effects of rewards and progress tracking associated with playful environments (Eisingerich et al., 2019). The negative effects that reduce the effectiveness of the game are also due to the use of money. Indeed, according to (Bauer et al., 2020) monetary rewards used to incentivize game participation diminish these effects.

Gamification loses its positive effects if games are combined with monetary rewards, as consumers no longer play games to derive inherent enjoyment, but rather the extrinsic motivation of receiving a discount. Instead, playing a shopping-related game without monetary participation incentive positively influences three relational outcomes: customer satisfaction,

loyalty and positive WOM intentions. This because games enhance consumers' enjoyment of the overall shopping experience.

Gamification can have ethical effects. Some scholars argue that professionals and designers should be cautious about the use of gamification practices. this is because it could involve an unfair advantage of workers (exploitation), infringes any involved workers or customers autonomy (manipulation), an intentionally or unintentionally harms workers and other involved parties (Yang et al., 2017). This has a negative effect on the moral character of involved parties (Kim and Werbach, 2016). The game concerns the needs of self-expression, the desire to set new goals, new challenges and overcome them. It allows to create involvement, motivation, loyalty to achieve goals that are difficult to achieve with other tools. In order to be developed, games need rules and boundaries. There are four key elements from the definitions of Gamification (Mcgonigal, 2011):

- Gamification is an activity that involves doing something
- Gamification uses game design and techniques borrowed from games
- It is applied in non-game contexts
- It is used to motivate people to achieve some goals

Identify goals and success criteria is fundamental, because people are driven by an interest or a pleasure (Prensky, 2007). For this reason, is fundamental understanding who are users and what motivates them. Like any project and marketing plan, it is necessary to identify who are the target customers. Each profile could have different reasons and needs to satisfy. subsequently it is necessary understand which are the right levers to move to incentivize them. Gamification is an excellent supporter when users already have an underlying motivation to follow a certain action. To motivate people usually it can be used the "epic meaning". This can be compared to the vision and mission used by a company to define their long-term strategic goals. this means making people feel part of a higher project. For example, carrying out a specific activity not only to improve the team goals but also help others stakeholder. For this reason, it is necessary to define some KPI (Key Performance Indicator). The rules are the obligations that make any game exciting, interesting and challenging. Choosing the right mechanics is very important. They have to combined to obtain the best experience of gaming, not only according to the strategic goals but also to motivate the customers. Gamification acts on the human psyche. Within a game design it is necessary to use different mechanics (Petruzzi, 2017; Maestri et al, 2018). the most famous are:

- Points/credits: they are the immediate reward for the player's actions.
- Levels: They are a system to insert progressive goals, in order to influence the player's motivation.
- Badges / Achievements: the badges set off the achievement of a goal, increase the sense of the challenge and typify the player's profile.
- Rank: they are a method to organize users' performance. The comparison among people generates a sense of competition, foster interest and increase the time spent in the game.
- Challenges: they are obstacles which the player must overcome to earn points, badges and level up.
- Virtual assets: they are goods that have value for the player within the virtual world of the game but also in the real world.

When talking of gamification, there are some prejudice, clichés and common places. A common mistake is to consider gamification as a generalist attempt to transform serious

contexts into playful ones. When they talk about games need to make some clarifications. Deterding et al. (2011) have developed a matrix between the concepts of: gamification, serious game, toys, playful design (Fig. 1). In the matrix is shown the differences among gamification and other types of games.

Gamification is using mechanics of game design in non-game contexts to achieve a specific goal (e.g. motivate and involve). Serious games are 100% games. For example, Apple uses the "progress bars" and challenges between friends inside the Apple Watch to measure physical activity. In this case we are talking about gamification because the movement section of the Apple Watch is not a game. A "serious" game is a whole and complete game. For example, "Wii Fit" (a videogame of Nintendo) is aimed at exercising at home. The term "serious" has been used to indicate serious contexts, other than mere entertainment. They can be used in many different fields like health, marketing, social and non-profit issues, education and school, corporate and human resources.

When talking of gamification, there are some prejudice, clichés and common places. The relationship between consumers and "games" is somewhat more complex than has been suggested by those promoting gamification (Insley and Nunan, 2014). If the strategy is reduced only to inserting points or badges, without a precise objective, the result is poor, weak and users will leave the game. if this happens, we are talking about of "pointsification" or "badgeification" degenerations of gamification. Gamification does not mean adding points and rankings. Points, badges and leaderboards are some gamification mechanics but these are not enough to motivate people (Petruzzi, 2017). A common mistake is to consider gamification as a generalist attempt to transform serious contexts into playful ones. Gamification does not work miracles. If there is not a personal motivation, people will not find anything kind of gaming to convince themselves.

Figure 1 − Gamification between game and play
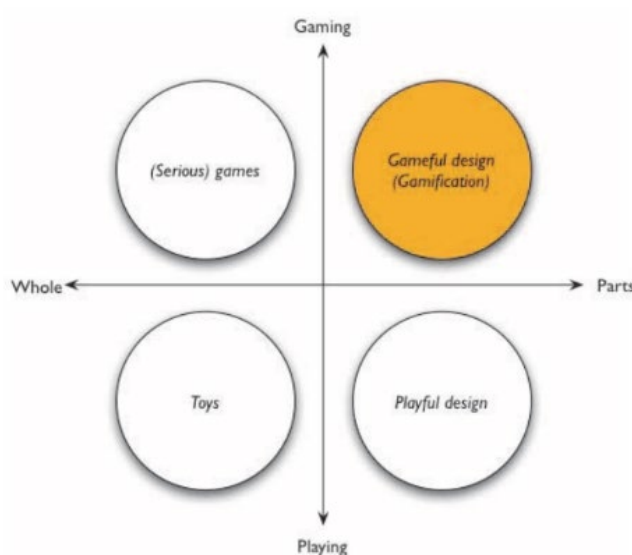


Source: (Deterding *et al*, 2011)

For instance, serious games have been used for years in the health sector. Doctors can train in simulated environments that do no harm to patients. There are games that facilitate the treatment of certain diseases. Some researchers thought of a way to reduce pain without using anesthetics and saw that it can be done using a serious game. Gamification exists in a large

number of different fields like retail, media, consumer goods, healthcare and so on. It is used as means to educate employees in all types of industry, create customer engagement to brands and businesses, and even nudge people to change their behavior (Wünderlich et al., 2020). The game that was developed by the University of Washington and some researchers to reduce the pain of hospital burns (Hoffman, 2004).

The boundary between gaming and serious game is not always defined and clear. To understand if we are talking about gamification or serious game it becomes essential to know the reasons of players and the creator's goals. The intentions of the players in some cases are able to influence the concept of entertainment. Toys are not games because they have no goals or objectives and are made to play together (Prensky, 2007). While "playful design" is the application of some elements of unstructured play not game. Obviously, in some cases the boundary lines between one quadrant and another one can be subtle and subjective (Deterding et al, 2011). Gamification design is a process focuses on human motivation. This process is called "Human - Centered Design". This term was coined by Mike Cooley in 1982 his book "Architect or Bee?". According to ISO 9241-210: 2019: "Human-centered design is an approach to interactive systems development that aims to make systems usable and useful by focusing on the users, their needs and requirements, and by applying human factors/ergonomics, and usability knowledge and techniques. This approach enhances effectiveness and efficiency, improves human well-being, user satisfaction, accessibility and sustainability; and counteracts possible adverse effects of use on human health, safety and performance" (OBP, 2019). Most systems are focused on function designed to get the job done quickly. Within the process the human variable is underestimated, for this, "Human-Centered Design" allows to improve the potentialities of the human factor inside a process, thus optimizing motivation and commitment.

The guru and pioneer of gamification Yu-Kai Chou elaborated 8 core drivers standard in his framework "Octalysis" (Fig. 2), to indicate different types of motivation (Chou, 2015). These motivational elements define and explain the user's involvement, they help to classify game motivations in relation to the needs and desires of a hypothetical user / player.

Figure 2 − Octalysis Framework
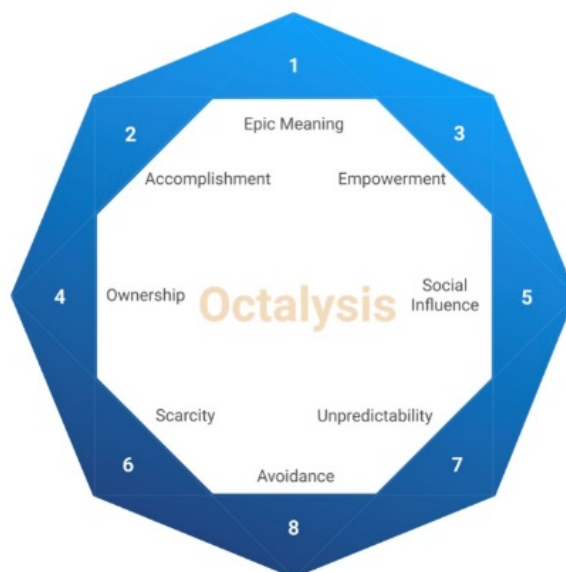


Source: Chou (2015)

The eight core drivers are:

- *Epic meaning and Calling*: The "epic" sense is the desire to participate in something higher or to help at the creation of a collective good. People decide to pursue a goal, a mission. For centuries, populations, philosophers, political and spiritual leaders have believed that the best way to give meaning to existence is to connect daily actions with something greater (McGonigal, 2011). The epic meaning can be collaborating with other people to achieve common goals, for instance "Wikipedia".

- *Accomplishment and Development*: People need motivation so they create challenges and goals of increasing complexity. The need to improve and overcome one's limits. For example, points, credits, badges, rankings, progress bars are all techniques that meet this need.

- *Empowerment of creativity and feedback*: Self-expression indicates that innate tendency that leads man to experiment, to customize, to try different creative combinations to obtain different results, for example Lego bricks or within a video game the custom-tailoring of Avatars. The need to express oneself is linked to the need of receive positive feedback.

- *Ownership and Possession*: Each person has an innate instinct of ownership, a natural desire to possess something. People usually have a hard giving up something they have built or conquered, even if the thing they own is only virtual.

- *Social influence and Relatedness*: This means that our life is influenced by the social pressure that pushes us to do or not to do a certain action. Factors can be the need for acceptance in the community, reciprocity, status and so on. Cooperative and competitive mechanics within a social system are also found inside a social game; the sense of "community" characterizes many activities, including gamification.

- *Scarcity and Impatience*: The concept of scarcity is very ancient. Already the ancient Greeks spoke of scarcity with the myth of Pandora. More a resource is scarce more the good takes on value and people do everything to get it. For instance, if in marketing strategy is possible to convey the feeling that a product or service is limited, potential buyers will try to not miss the opportunity, moved by the fear or anxiety. Mechanisms such as the countdown, rely on the time scarcity factor. Another gamification technique based on scarcity is the "appointment" that is specific predetermined moments in which the game system offers the possibility of seizing a potential advantage, think for example at "black Friday".

- *Unpredictability and Curiosity*: This motivational factor is based on psychological and medical concepts. For instance, gambling games such as prize contests, draws, bets and lotteries. However, such motivation can lead to negative consequences, people risk developing a real gambling addiction. Game designers use this core drive through bonuses or "easter eggs" game elements that the developers hide in the game letting the user discover them generating a surprise and a "wow effect" (Kotler *et al*, 2017).

- *Avoidance and Loss*: Fear of loss is an innate instinct of mankind when one wants to avoid losing something or to avoid negative events. Applied to game mechanics an example is negative reinforcements or malus. If They do not a certain action, a negative event happens or one have to lose something.

All the core drives of "Octalysis" framework act on the brain influencing behaviors (Fig. 3).

Figure 3 different motivations within the Octalysis framework
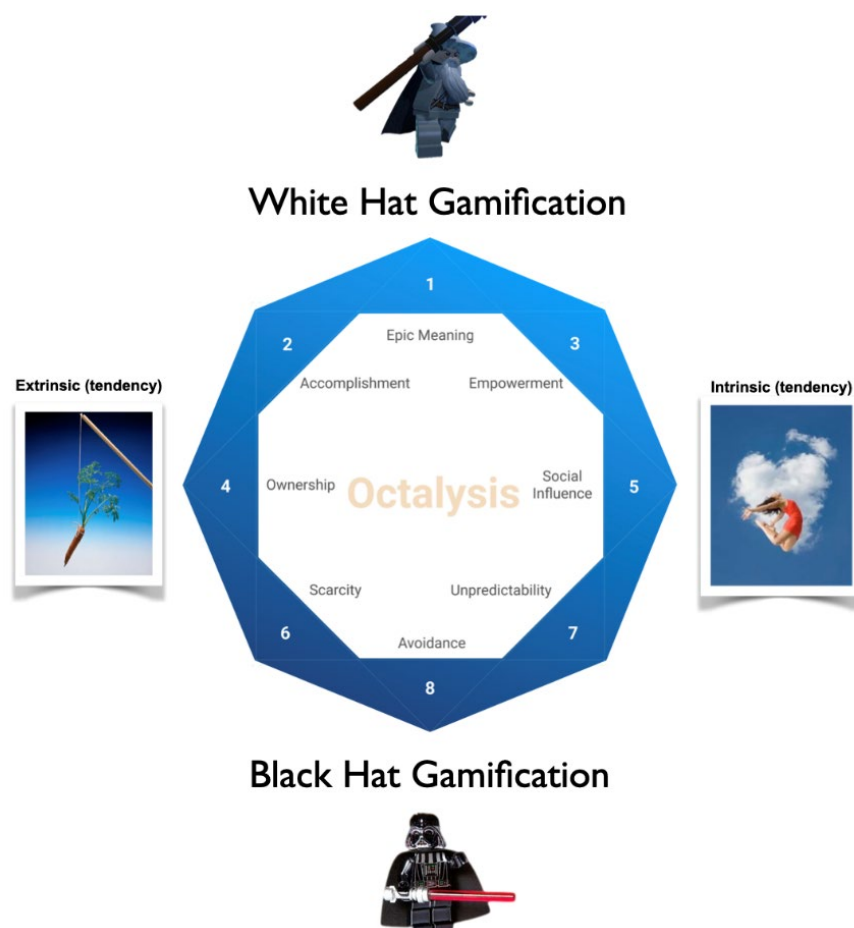


Source: Adapted from Chou (2015)

The framework can be analyzed from different perspectives of analysis. The first level of analysis is shown in the figure n.14 where the core drives on the left side are "extrinsic motivations" like logic and rational calculation, while those on the right side are "intrinsic motivations" based on creative thinking, self-expression and social aspects. Gamification influences the human mind not only in a positive way but also in a negative way (think of gambling). The upper "core drives" are defined as "white hat" (good / positive) while the lower part of the framework is based on negative "black hat" (bad / negative) motivators (Chou, 2015). The human factor within the framework is fundamental. The gaming industry was the first to adopt "human-focused design". A game is not an easy activity, it requires commitment, time, and sometimes a money outlay. However, millions of people every day spend part of their day doing this activity (Petruzzi, 2017). The 8 motivational factors do not remain fixed but change with the user's motivation, the mechanics used and the flow of time represented by the "customer journey". There are also further levels of analysis, for example the second level is based on the player's journey (Fig.4).

Figure 4 − Customer journey
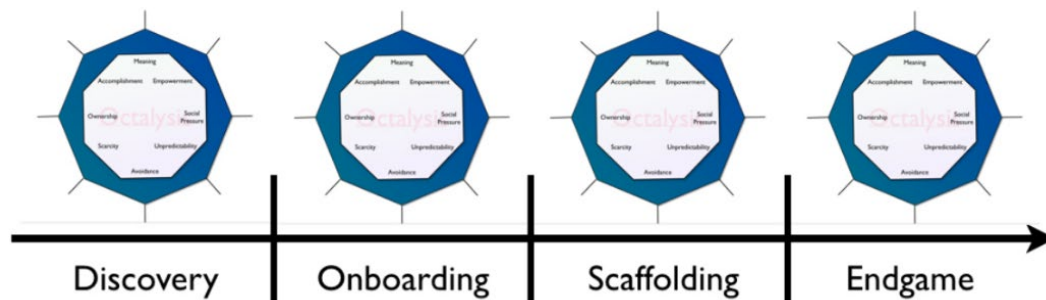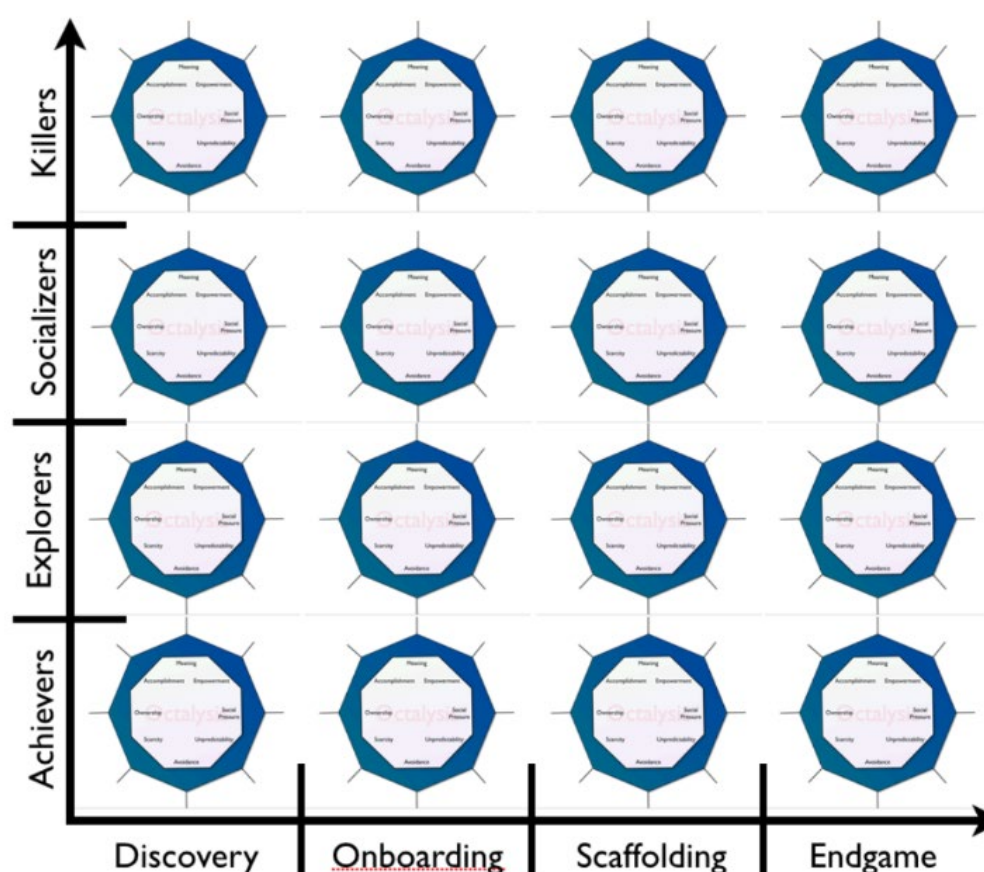


Source: Chou (2015)

During the journey, it is necessary monitoring the interaction between user and product. If the product attracts people at the start of the game, the engagement doesn't necessarily stay the same all the time until the end. Scholar Chou has elaborated 4 phases of the game experience (Chou, 2015):

- *Discovery*: the player discovers and learns for the first time the product or service offered by the company. This happens for example with the creation of an account, the choice of the type of profile and access to the service.
- *Onboarding*: in this phase it is necessary to help the player to become familiar with the game rules, options and mechanisms. Gamers want to get started quickly and want to have fun. For instance, one can use a video or an interactive tutorial. The onboarding process must inspire the user to start the game with enthusiasm and motivation. This phase ends when users are fully equipped and ready to embark on the journey on their own.
- *Scaffolding*: in this phase the players use all the rules and notions they have learned during onboarding. Players return regularly and daily to perform desired actions and try to achieve as many milestones as possible.
- *Endgame*: this phase happens when the players accomplish all the objectives or the time available is over (such as the end of a competition or contest). If game designers don't make a good Endgame, people will get bored easily and they will leave the game.

The player's journey is "the customer Journey" in the field of gamification. The customer journey can be described as the path which a consumer proceeds interacting with the various contact points of the Brand. the customer Journey is represented as a succession of phases. the historical model is represented by the "4 As": Aware, Attitude, Act, Act Again. This model was developed by Rucker as an evolution of the "AIDA" model (attention, interest, desire, action) formulated by Elias St. Elmo Lewis. However, in the digital age the community and social networks carry out a strong influence from the earliest stages of the journey. For this reason, the customer journey must be described with a new model represented by 5 A: Aware, Appeal, Ask, Act, Advocate. Throughout the course of the customer journey, businesses can use creativity to improve customer interactions. From the customer's point of view there are three levels of interaction. The first is "enjoyment" and this happens when companies receive feedback from their customers. Companies can also offer pleasant "experience" in addition to products and services. they will improve customer interactions by diversifying the service modes between in-store and online experiences. The companies reach the highest level

producing "engagement". To transform a shopper who buys a product for the first time into a loyal supporter, a series of customer engagement activities are required. there are three techniques that can increase engagement and these are the use of mobile apps, the application of "CRM" (Customer Relationship Management) and the use of gamification. Gamification is a very useful tool for improving engagement. It is based on the human desire to achieve goals and to have one's successes recognized. Some customers are motivated by rewards, others by a sense of self-fulfillment. Gamification is a way to collect customer data. Big data analysis allows you to identify trends in customer behavior, useful for marketing automation, for example in the personalization of sales and cross selling. The firms personalize products and services by offering a complete customer experience (Kotler *et al*, 2017). The journey is a more or less conscious path that people begin when decide to become buyers of a good or service, from the first contact to the final phase (Kotler and Stigliano, 2018). In the case study the journey is represented by a "treasure hunt" and ends with the conclusion of the competition. A third level of analysis takes place by building a matrix where in the x-axis there is the user's journey, while on the y-axis the types of players (Fig. 5).

Figure 5 − Third level matrix



Source: Chou (2015)

The types of players were classified by the scholar Bartle who identified the taxonomy of player types in four different personalities. Initially the classification described players of multiplayer online games, while now it also refers to players of single-player video games. The

typologies proposed by Bartle are a starting point for creating gamified systems. these are (Bartle, 1996; Zichermann and Cunningham, 2011):

- *Achiever*: this type of user aims to collect levels, equipment or any other form of progression within the game.
- *Explorer*: this type of user spends more time in the game, discovering new features, creating customized levels and generally demonstrating their knowledge of all the secrets of the game experience.
- *Socializers*: they are those who play above all for the social aspect, interpreting the game as a tool for socialization, perhaps to have only a return of image by creating a network of contacts.
- *Killers*: this type of user aspires to their own supremacy on the opponent. The killer confronts other players to assert himself, they are not interested in being hated or feared, but only aims to excel in direct confrontation with others.

## 3. Gamification in the World

According to Technavio Research report, Global Gamification Market to Accelerate at 27% CAGR and Register $ 17.56 Billion Growth During 2020-2024 (Fig. 6).

Figure 6 − Global Gamification Market



Source: https://www.businesswire.com/news/home/20201204005520/en/Global-Gamification-Market-to-Accelerate-at-27-CAGR-and-Register-17.56-Billion-Growth-During-2020-2024-Technavio

Another report from Verified Market Research states that Business Gamification Market was valued at USD 7.17 Billion in 2019 and is projected to reach USD 33.33 Billion by 2027 (Fig.7).

Figure 7 − Global Business Gamification Market



Source: https://www.verifiedmarketresearch.com/product/business-
gamification-market

A further report (TechSci Research, 2019) says that the global gamification market was valued at $6.8 billion in 2018 and is projected to grow at an impressive CAGR of 32% to reach $40 billion by 2024. This is due to demand growth for customer experience enrichment and improved engagement of employees. Gamification refers to the integration of game mechanics within business process, website, or marketing campaign. Increasing number of mobile devices is positively influencing the growth of the market. Social media platforms are contributing to the growth of gamification market as they allow users to share their experiences (TechSci Research, 2019). According to the report, the gamification market is expanding to various regions including Asia-Pacific, North America, Europe, South America, the Middle East and Africa. North America and Europe are the leaders in the global gamification market. Major players operating in the global gamification market include Microsoft Corporation, SAP SE, Salesforce.com, Inc. Leveleleven LLC and Bunchball Inc. Furthermore, gamification is a useful tool for increasing customer engagement; especially regarding loyalty programs and customer communities (Kotler et al, 2017). There are many reasons for implementing gamification in the marketing strategy:

- *Involvement*: currently people are constantly influenced by input of mass media. For this reason, among the various scarce resources available, the new "oil" is becoming time (not just data).
- *Motivation*: a gamification project is based on the study of psychological factors capable of motivating users throughout the customer journey. This type of analysis allows to categorize the target customer in the marketing strategy.
- *Loyalty*: It can be expressed in various ways. From the traditional "loyalty card" in which points are collected to obtain rewards, to the modern forms like the use of technology and digital channels.
- *Learning experience*: complex products or services require an initial learning moment by users. Gamification can be a useful tool to facilitate the "onboarding" step.
- *Data collection*: Every action made by users is tracked and monitored. Gamification can entertain users and at the same time generate a series of behavioral and profiling data to be used in marketing and R&D.

Gamification does not only concern relations between the company and the final consumer but also relations with employees. Gamification makes it possible to rethink the work experience as a means to improve the well-being of employees. This leads to better performance and better customer service, thereby increasing the company's overall competitive advantage and revenue (Hammedi et al., 2021). One of the words that is often associated with gamification is loyalty. According to a (Kim and Ahn, 2017) rewards could weaken intrinsic motivation to use a retail loyalty program. Organizations are discovering that gaming can be a useful tool in many different ways. Not only for customer loyalty, but also for users and employees, generating a sense of belonging to the company. For example, point collections in supermarkets are primal loyalty applications through mechanisms such as points and rewards, loyalty cards have been used extensively in the retail business over the last 20 years (Ennis, 2015). Today, Internet technology, social networks and technologies based on mobile marketing offer new possibilities. the applications offered are numerous and varied depending on customer target, good and service offered by the company (Petruzzi, 2017). Gamification is also used for sustainable goals, reward-based game design elements including points, badges and other rewards contribute to enhancing sustainable behavior outcomes (Mulcahy et al., 2021).

## 4. Gamification in retail services: The UCI Cinemas case study

The case consists of a new form of customer involvement in retail of cinema sector services. The topics about this strategy are represented by gamification in the retail sector, new methods of promotion and communication based on the fusion of virtual online and offline stores and collaborations among heterogeneous companies with the use of omnichannel retail. According to Fernandes (2018), the online channel is a valid channel, and the in-store retailers needs to rethink the inclusion of an omnichannel solution to solve the in-store versus online shopping retail system. In this case study, it is appropriate to talk about interactive marketing because the case study is based on a "treasure hunt" which falls within the widely known theme of "customer experience", i.e. a sum of total interactions that a consumer makes throughout the entire process of purchase (Rayport and Jaworski, 2001).

Omnichannel allows a synergy between various channels, physical and virtual, creating a fluid and effective customer experience (Kotler et al, 2017). The term "omni channel" is a particular approach by retailers. This approach recognizes that people interact with many touchpoints throughout the buying process. It is about creating an integrated and seamless experience for customers as they interact with the organization. For instance, a shopper at various stages in the process may interact with the retailer via email, a store branch, a call center, a kiosk/ATM, mobile app and/or online channel (Ennis, 2015). In addition, we can also speak of retail 4.0 due to the use of mobile marketing.

The use of smart technologies is increasingly catching the attention of researchers and practitioners, especially in retailing contexts. For instance, Poncin et al. (2017) examine the impact of two gamification mechanics, challenge and fantasy, on customer experience. Gamification through continued engagement intention is positively associated with brand engagement (Högberg et al., 2019). Playability, design aesthetics, goal clarity, incentive provision and symbolic benefits were drivers of consumer–brand engagement, which in turn generated purchase intention, app continuance intention and brand loyalty (Tseng et al., 2021). In particular, the case study is based on the use of QR Code technology combined with data management through cookies and click baiting strategies. Cookies are fragments of data stored on a user's computer when connecting to a specific site. This allows us to reconstruct user

behavior, preferences and improve navigation with "suggestions". The exchange of information allows to send customized information. From this point of view, the omnichannel strategy makes it possible to place the use of the service offered above technology. The goal is to use a holistic approach recognizing the uniqueness of customer (Kotler and Stigliano, 2018).

Retail in service sector is characterized by four distinctive elements, the so-called "4 I": Intangibility, Inconsistency, Inseparability and Inventory (Kerin et al, 2014). The services are intangible because they cannot be seen before deciding to purchase them, they are a performance for consumers, so their evaluation is very difficult a priori. The heterogeneity is due to the difficulty of deciding how to promote a service because the human factor is relevant. The quality of a service changes according to the type of consumer, desires and the time available. Inseparability consists in the level of interaction and involvement between the consumer and the service offered. Their perishable nature is due to their immateriality and therefore the impossibility of maintaining them over time. In this case study the "gamification" technique is used through a prize competition to promote the sales of tickets for the film "Fantastic Beasts - The Crimes of Grindelwald". The competition, thanks to the method of participation, allows for a playful experience in line with the company's mission.

The case study concerns the company UCI Italia S.p.a, which through the delegated firm Wepromo S.r.l. implemented a marketing mix strategy based on gamification and omnichannel retail, in the Italian territory and in the Republic of San Marino. The goal of the strategy was to promote the sale of tickets for the film "Fantastic Beasts: The Crimes of Grindelwald". The film is part of © "Wizardind World", a limited liability company (LLC) created as a joint venture between Pottermore Ltd and Warner Bros.

The company is part of a franchise owned by British writer © JK Rowling for editorial and theatrical rights, and © Warner Bros. Entertainment Inc. for film market rights. The franchise originated from writer Rowling's Harry Potter ™ series of novels. The firm UCI Italia S.p.A. to promote the sale of tickets for the film: "Fantastic Beasts: The Crimes of Grindelwald" "has set up with the help of partner companies, a prize competition called" Win magical prizes with UCI Cinemas and Fantastic Beasts: The Crimes of Grindelwald ". This contest lasted from 31 October 2018 to 2 December 2018 with the final prize draw by 18 January 2019. The company has implemented a marketing mix strategy focusing on the "promotion" of the marketing mix. The competition was designed using the dynamics and mechanics of gamification. In addition to buying the ticket, the customer can decide to participate in a "treasure hunt". The game mode was designed using the retail omnichannel by connecting physical and virtual channels thanks to the collaboration of partner companies (Fig.8).

According to (Jami Pour et al., 2021), few studies have empirically examined how gamification influences customer experience by considering the mediating role of brand engagement in the online retailing context. In this case study the element of the brand plays a very important role, because the treasure hunt was designed using characters linked to the Harry Potter franchising. In addition, some mechanics, based on the wow effect (such as the "lumos" spell) allow you to make the customer's journey even more engaging.

Figure 8 − Partner companies



Source: screenshot of Video Advertising

Several associated parties and a delegated party were involved. Specifically, these companies have hidden posters / banners relating to the game within their sites and physical stores. The customer/player begins this treasure hunt by looking for the advertising icons of the film (Fig. 9) within the UCI Cinemas, the numerous partner sites and in the brick and mortar Coverstore stores.

Figure 9 An example of game banner
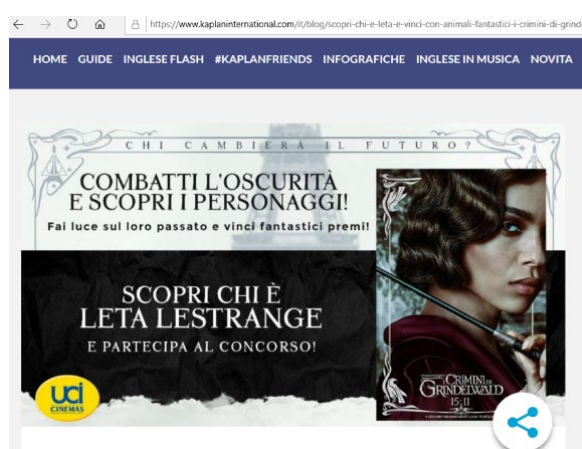


Source: Banner made by the promoter of the contest

By clicking on these icons for the first time via smartphone or QR code in participating real stores, the user registers on the website "www.combattiloscurita.ucicinemas.it" providing their personal data requested. In this way begin the treasure hunt which, as explained in the regulation, is aimed at identifying a maximum of 5 characters from the film: "Fantastic Beasts: The Crimes of Grindelwald". At this stage of the customer's journey, the technology of cookies and click baiting comes into play. The advertising icons are not fixed on a predefined page, but must be searched by clicking the various windows of the sites even without any correlation. The treasure hunt also lasts several days, as the player can find the character's icon on a partner site where there was no trace in the past few days. Depending on the number of characters found, the customer has access to a predetermined list of various prizes. the final prize is a "Kaplan study holiday" in England. To participate in the awarding of prizes, participants must

reveal the identities of 5 characters in the film by first reading a short biography of the character and then answering a question of elementary difficulty inherent in the text read (Fig.10).

Figure 10 − Clues about the specific character



Source: https://www.kaplaninternational.com/it/blog/scopri-chi-e-leta-e-vinci-con-animali-fantastici-i-crimini-di-grindelwald

After reading with clues from the life of the character from the film, players must associate the image with the correct description. In addition to the awarding of the various prizes provided for in the competition, the game also includes intermediate milestones such as the awarding of rewards. Players who manage to find all 5 mystery characters receive a special email - "wow effect" (Fig.11).

Figure 11 − Email received from a player
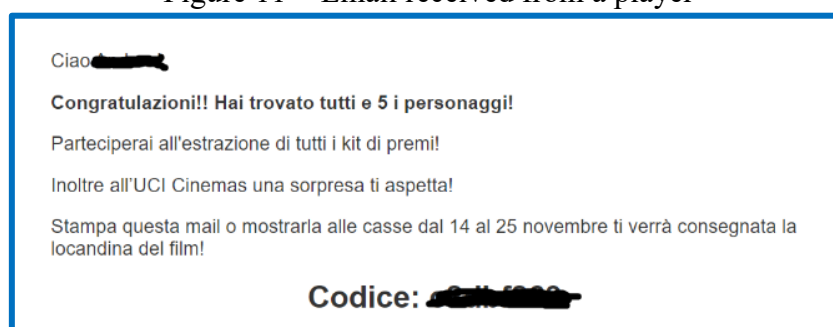


Source: promoter of the contest

In detail, those who deliver the completed e-mail printed to the tills of a UCI cinema (during the period from 15 to 25 November), will receive the film poster for free (Fig.12).

Figure 12 − Special prize

The playful experience does not end with the search for the characters, in fact by purchasing the film ticket at a UCI cinema, the customer has the possibility to access the internal rooms prepared with some "special" posters provided with QR Code. QR Codes unlock the spell "Lumos" (Fig.13) (term linked to the fantasy world of the film) double the chances of winning by appearing twice on the extraction database.

Figure 13 "Lumos" spell
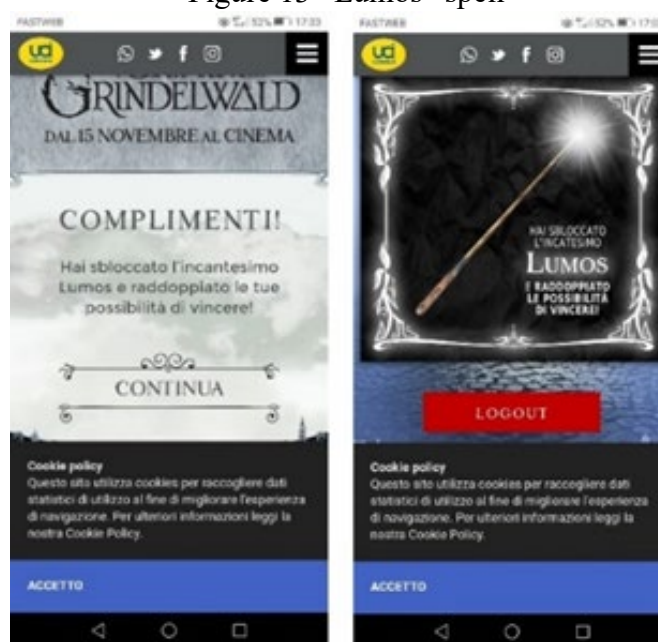
## 5. Concluding Remarks

The goal of a gamification strategy is to create "engagement". The real player wants to immerse themselves in the game, following the rules. The main reward is the game itself. Each player needs to know when they have achieved a goal or how close to achieving its. A game must have feedback because it provides the motivation to keep playing. To correctly implement gamification within the marketing strategy, it is necessary to collect and analyze feedback to understand if the actions taken are correct or have to be changed and improved. The methods of collecting feedback change according to the project but they can be divided into two types:

Quantitative and qualitative. Quantitative feedbacks are statistical and structured data. They can be also the KPIs decided at the beginning of the marketing plan. These must be used as a parameter to analyze the effectiveness of the implemented system. Quantitative feedbacks are normally collected and measured by online tools such as Google Analytics, Hotjar and could relate to the click rate on a given button, the time spent on a given page, the number of shares or likes of a post, the percentage of people opening an email and so on. Qualitative feedbacks collect information that attempts to describe a topic rather than measure it. They are used to understand the reasons, viewpoints and motivations behind a certain action. One of the easiest ways to collect qualitative feedback is to ask questions via online surveys, one-to-one live or remote interviews, or how the customers react to the gamification experience. Quantitative feedback helps to understand if the project is working while the qualitative ones will be able to tell why it is working. Gamification follows the pull logic based on player involvement. The player decides to accept the objective, the rules and the feedback system. Gamification within retail companies makes it possible to overcome obsolete and ineffective organizational models. It allows the creation of interactive, engaging and self-directed learning environments in which stakeholder is not just a passive recipient of orders and notions.

By exploiting the symbiotic relationship that exists between play and learning, gamification can become an ally to stimulate the continuous improvement of all stakeholders in their relationships with the reference organization. Through gamification, the retail company can establish a direct contact not only with customers but also with employees (internal stakeholders). Through the implementation of game design, stakeholders can become "ambassadors" of the company in the specific and general environment. It must be clarified that gamification is not a panacea, which can be used "one best way" in any context to make a product or service a winner. There is not a tested formula but infinite applications with different methods to be discovered. Gamification helps people to improve their involvement through fun in daily activities. All in the name of innovation and play. It can help people to be better workers. For this, it should not be used as a trend or a passing fashion but a real "cultural revolution" to be used systemically in the life of the company.

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**Book Review:**
**Raval, V. (2020),** *Corporate Governance. A Pragmatic Guide for Auditors, Directors,*
*Investors and Accountants***, New York, Auerbach Publications.**
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Corporate governance, defined as the system by which companies are directed and controlled, in order to protect stakeholder interests and ensure reasonable return on investments, has evolved to address the dynamics of the markets and this evolution followed different routes and reached different destinations in corporate practice, company law, and associated institutional development of corporate enterprise.

The book "Corporate Governance. A Pragmatic Guide for Auditors, Directors, Investors and Accountants", of Professor Vasant Raval, first published in 2020, part of the Internal Audit and IT Audit Series of books that publishes leading-edge books on critical subjects facing audit executives as well as internal and IT audit practitioners, brings a clear understanding of this complex scenario.

The book, divided into four parts, that is, cornerstones, governance roles and structure, governance in action, and other topics, provides a picture of the current state of corporate governance in the USA. The book started with the foundation of governance, evaluating the reasons and the nature of corporate governance, indicating its significance and purpose, the main principles and its framework, underling why governance is an extremely relevant factor for the life of the company. This first part continues taking into consideration operational, strategic, and tactical risks linked to corporate governance and defining the main risk management approaches ending with the analysis of the ethical dimensions of corporate governance, and its code of conduct.

The second section of the book continues identifying the key players in the area, and discussing their roles. The main figures analyzed are shareholders, the board and the management, but also the government and the regulators that apply to the conduct of the company and coregulators, facilitators, and consultants as assisting those in charge of governance with their actions which contribute to the governance process. In this scenario, the stock exchange is also taken into consideration, with a dual role of facilitating transactions and listing the company stock for trading on the exchange. This part takes into consideration also the role of the Internal Auditing Function (IAF) that has the primary function of managing business' risks and of the figure of the external auditor, as an outside, independent provider of assurance about fairness of financial results.

Subsequently section three discusses the relationship between shareholder, the board and the management, analyzing their dynamics, with a specific focus on organizational wrongdoing considered as an improper or unethical act on the part of any member or members of the organization and the explanation of the Disposition-based Fraud Model (DFM).

In the final section, the book defines the key issues in two main aspects of corporate governance, that is governance of nonpublic organizations, including nonprofit organizations, and future directions in corporate governance. When analyzing the governance of private organizations, the book makes a specific focus on family-owned businesses, as particular entities whose owners belong to a single family, highlighting the difficulties in the governance of a structure where family and business should be two separate entities, but this demarcation is not always so simple to maintain.

Finally, as future directions of corporate governance, the business environment has been taken into consideration, evaluating factors such as the global competition and the difficulties related to the different cultures in which companies want to do their business. But also, the variable of technology, seen as a disrupter of the existing mode of doing business, causing a redefinition of jobs, shift in business model, and even displacement of older competitors; cybersecurity connected with the problem of cyber-attacks that can result in loss of data, unavailability of systems and programs, and disruption of services, and the issue of integrating sustainability practices in corporate strategy.

This book is structured to be a helpful map to enter the world of corporate governance, since it merges theory and practices, thanks to the personal experience of the Author as an Auditor and board member. The book provides practical insights illustrating theory with recent cases, proving to be a great source of information for anyone that has to do with the ecosystem of corporate governance such as professional accountant, securities lawyer, economist, financial analyst, and auditors. I would strongly recommend this book as a quick guide for a greater understanding of the dynamics of corporate governance; it is easy to read and certainly approachable by figures with transversal skills to corporate governance.

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